

# Index

## MONTHLY CATALOG, JANUARY-DECEMBER 1963

NOTE.—Entries appear in this Index under subjects or titles. Bulletins, circulars, etc., having no specific subjects are entered under the issuing office only. Index citations are to entry numbers in the catalog.

A	Entry	Entry
A.C.I.C., see Aeronautical Chart and Information Center.		
A.E.C., see Atomic Energy Commission.		
A.F.F.T.C., see Air Force Flight Test Center.		
A.F.I.T., see Air Force Institute of Technology.		
A.F.S.W.C., see Air Force Special Weapons Center.		
A.I.D., see International Development Agency.		
A.I.D. background series.	12260	
A.M.C., see Army Materiel Command.		
A.M.R.L., see Aerospace Medical Research Laboratories.		
A.M.S., see Agricultural Marketing Service—Army Map Service.		
A.P.R.O., see Army Personnel Research Office.		
A.R.A., see Area Redevelopment Administration.		
A.R.L., see Aeronautical Research Laboratory.		
A.R.S., see Agricultural Research Service.		
A.R.S. series.	8-13, 1622-44, 4337-43, 5790-99, 7540-47, 9537-44, 11431-441, 13155-156, 14832-841, 16711-714, 18390-406, 20261-264.	
A.S.A., see School of Aerospace Medicine.		
A.S.D., see Aeronautical Systems Division.		
AAL, see Arctic Aeromedical Laboratory.		
Abbot, C. G., solar variation and weather.	21108	
Abbott, Frank T., Jr., propeller-power-plant autoprocession boundaries for dynamic-aeroelastic model of 4-engine turboprop transport airplane.	16381	
Abbreviations:		
contractions used by FAA, air traffic control, etc., handbook.	9641	
Latin American press usage, glossary.	12696	
used in Africa, corrected version.	6806	
Abdo, Albert N.: market for U.S. products—Kuwait.	8377	
Saudi Arabia.	5092	
Abel, J. E., narrow-band telemetry of nonrecurrent pulses.	11179	
Abel, William T., solid-in-gas suspensions as heat transport mediums.	14520	
Abele, Gunars, correlation of unconfined compressive strength and ram hardness of processed snow.	19136	
Aberdeen Proving Ground, Md., Human Engineering Laboratories, technical memorandums.	9314	
Abernethy, Roy F., rare elements in coal.	10940	
Abilene, Tex.:		
Clear Fork, Brazos River, flood control, engineer report—departmental edition.	404	
document edition.	244	
Ability:		
ability counts, contest for 11th- and 12th-grade students, announcement.	9034	
human factors problems in image interpretation task, status report.	16830	
human factors research in image systems, status report.	11546	
human resources, training of scientific and technical personnel.	2443	
information theory, use for studying, USSR study.	17622	
pupil grouping, does it make difference?	8161	
sequential item test technique, exploratory study.	18559	
see also Aptitude tests.		
Ability Counts Contest, see National Ability Counts Contest.		
Ablating materials:		
ballistic missiles, Ames atmosphere entry simulator to determine properties.	11006	
evaluation of thermal protection materials at moderate heating rates and high total heat loads.	16382	
injected into hypersonic shock layer, thermal radiation from.	18159	
investigation in electric-arc-heated air jet.	11019	
nylon, investigation for ballistic missiles.	10995	
rocket-engine, performance after postrun cooling at altitude pressures.	12863	
spheres behavior ablating under constant aerodynamic conditions.	11030	
structures and material tests in 6-inch subsonic high-temperature arc tunnel.	11024	
Ablation:		
analytical investigation.	5564	
blunt body to Mach number of 13.1, free flight investigation.	1297	
stone meteors, mode.	14692	
Ables, Robert J., remarks, May 16, 1963.	10933	
Aboriginal cultural development in Latin America, interpretative review.	14695	



# INDEX 1963

Entry	Entry
Abraham, Lewis H., structural research problems for support of future space missions.....	18164
Abrasives:	
Federal item identification guides for supply cataloging, supplements.....	3658
materials, minerals yearbook chapters.....	18062
production, trade, etc., world survey, 1957-62.....	13268
Absolute identifications of cutaneous stimuli varying in both intensity level and duration.....	4502
Absolute intensity measurements in vacuum ultraviolet.....	18121
Absorber burn-up experiment.....	9673
Absorbers, BAK-G/F-27A aircraft arresting barrier absorber, evaluation.....	16773
Absorption:	
gases, by active metals.....	18508
infrared radiation in spectrum band by atmospheric water vapor, USSR study.....	19545
self, radiation, transition probabilities and level population densities determination.....	20303
solar, of spacecraft coatings, dynamic thermal vacuum, technique for measuring.....	9179, 18137
Absorption coefficients:	
atoms in reverse Zeeman effect with arbitrary direction of magnetic field.....	18170
propylene and butene-1 in vacuum ultraviolet.....	19898
X-ray mass, literature survey.....	12826
Absorption spectra, <i>see</i> Spectra.	
Abstracts, <i>see</i> names of departments, bureau, etc., issuing abstracts— <i>also</i> subjects.	
Abused child, principles and suggested language for legislation on reporting physically abused child.....	15088
Academy of Chemical Sciences, Armenian SSR, new drugs developed by Institute of Fine Organic Chemistry.....	19450
Academy of Foreign Affairs, <i>see</i> National Academy of Foreign Affairs.	
Academy of Medical Sciences, USSR:	
herald, translations.....	2590, 6794, 6994, 8511, 10643, 10675, 12682, 16224, 17768, 19530, 20818.
joint session with Academy of Sciences, consequences.....	2797
Academy of Sciences, Bulgaria:	
Atomic Center, research information.....	14353
Todor D. Pavlov and Lyubomir K. Krustanov, academicians.....	14356
Academy of Sciences, Estonian SSR, general meeting, scientists in ideology.....	19692
Academy of Sciences, Hungary:	
activities.....	2932
associations and societies.....	7060
congress and general assembly, 1963.....	19453
Division of Biological and Medical Sciences, activities.....	6760
Academy of Sciences, Kazakh SSR:	
activities in 1962.....	16034
general meeting session.....	5205
Academy of Sciences, Korea, report.....	8893
Academy of Sciences, Latvian SSR:	
activities.....	6670
institutes serving agriculture.....	10596
Academy of Sciences, Poland, Mathematics Institute, scientific activities of integral equations section.....	8446
Academy of Sciences, Rumania, betatron.....	8864
Academy of Sciences, Slovakia, Institute of Machines and Automation, cybernetic research.....	6969
Academy of Sciences, Ukrainian SSR:	
activities.....	863, 8825, 18000
bulletin, translations from Dopovidi Akademii Nauk.....	975
Computer Center, developments in cybernetics.....	2703
presidium activities.....	10572
reports, translations from Dopovidi Akademii Nauk.....	12415
Technical Sciences Department, news of joint session with USSR Department.....	2615
Academy of Sciences, USSR:	
activities, measures for improving, etc.....	16033
affiliates, trends in scientific research in 1963.....	2650
anniversary meeting.....	17607
annual meeting.....	12659
articles from reports.....	5134
biophysics, report.....	865
Chemical Sciences Department, general meeting.....	5162
Cytology Institute reports, abstracts.....	17576
dissertations defended in institutions, 1962, list.....	12574
geophysical series news, translations.....	2535
herald—	
articles.....	12373
biology series, translations.....	12661
joint session with Academy of Medical Sciences, consequences.....	2797
news, translations.....	6680
presidium meeting of May 11, 1962, molecular biology problem.....	2795
radiobiology, reports.....	7097
Siberian Department, accomplishments.....	15725
social sciences, recent reports.....	8965
technical cybernetics, news.....	19402
Technical Sciences Department, news of joint session with UkSSR Department.....	2615
Academy of Sciences, Uzbek SSR, zoologists, research activities.....	1112
Acadia National Park, general information.....	5633
Acaricides, laboratory tests at Brownsville, Tex.....	18392
Acceleration:	
angular, manipulation of arousal and its effects on human vestibular nystagmus.....	1849
disturbances encountered in MA-7 spacecraft, effect on liquid-vapor interface in baffled tank during weightlessness.....	3152
effect on human body, USSR study.....	15979
holograph and its application to space trajectory analysis, research study.....	19899
impact, technology for aviation crash injury prevention, synthesis.....	18353
bibliography.....	18354
maneuver accelerations experienced by commercial turbojet transport airplane.....	11070
multi-g, effect on nucleate-boiling ebullition.....	11017
negative, preceding subgravity, observation of elevator illusion.....	16791

	Entry		Entry
Acceleration—Continued		Accountants—Continued	
ships at sea, unmanned system for recording	16556	machine, 3 & 2, Navy training course	11146
Accelerators:		Accounting, <i>see</i> Accounts and accounting.	
design, principles, etc., use in nuclear research	20333	Accounting machines:	
grid, for electron-bombardment ion thrusters, studies	16363	current industrial reports	11626, 16891
high energy—		industry outlook for 1963 and review of 1962	1862
possibility of lowering injection energy, USSR study	10424	Accounting series circular	635
report of panel	15016	Accounts and accounting:	
impingement of electron-bombardment ion rocket, charge-exchange effects	11040	accounting practices in small firms	1483
Injection of electrons—		accounting series circular	635
dynamics of injected beam and central-shift capture mechanism	5936	accounting series releases, SEC	3412
experimental results	7699	aircraft management cost accounting, FAA handbook	19168
particle, principles, theory, and design, guide to Soviet literature	10925	certificated air carriers, uniform system	11651, 15098
traveling-magnetic-wave plasma, motion of plasma ring through	11031	code of Federal regulations	15502
Accelerometers, controlled rigid space vehicle, effect of propellant sloshing on stability behavior	20982	Communist China—	
Accessions index, Hist, etc., <i>see</i> Library accessions.		accounting for basic construction	14157
Accident Prevention Advisory Board, establish hearings	9939	major operation processes and accounting statements	14158
Accidents:		CPA laws and regulations, provisions, summary	18555
boating, reporting, rules and regulations	11680	Federal agencies—	
children, causes and prevention	16915	accounting forms, GAO guidance manual	10253
fabricated structural steel and metalwork industries	1158	joint financial management improvement program, annual report, 1962	586
families on guard against	20095	Federal credit unions, accounting manual	489
Federal employees—		finance and fiscal accounting and reporting, civil works activities, engineers, manual, change	2209
on-the-job, financial protection	16946	finance service and administration, Army pamphlet	108
work injury facts, 1961	8191	helping families manage their finances	13168
persons injured, U.S. statistics, July 1959-June 1961	5688	public schools, property accounting guide, implementing	8172
at work	5686	publications, price list	1395
in home		railroad companies, uniform system of accounts, interpretations	635
prevention—		school financial accounting	19108
handbook, Air Force manual	4380	socialist economic accounting problems discussed among Chinese economists, Chinese study	5370
nursing homes	13007	telephone companies, uniform system of accounts, FCC rules and regulations	15481
PACAF basic bibliographies	14916	United States Government central accounting system, regulations	14757
research, what it takes, etc.	20090	your progress and success in professional accounting at GAO	17515
radiation—		Accumulation of radioactive elements in body and their excretion	4469
incidents involving AEC shipments, 1957-61, summary	139	Acc Doran Hauling and Rigging Co., accident	17569
medical aspects, handbook for physicians, health physicists and industrial hygienists	11589	Acetic acid, EDTA and DCTA, hydrogen as retaining ion for rare-earth separation by ion exchange	3089
sawmills, survey of causes, 1956-57	16275	Acetylcholine, mediatory functions and nature of cholinoreceptors, USSR study	2969
<i>see also</i> Aircraft accidents—Marine accidents—Mine accidents—Motor vehicle accidents—Railroad accidents—Safety of life.		Acetylsalicylic acid, <i>see</i> Aspirin.	
Acclimatization:		Achievements in contemporary biology (USSR periodical):	
fish and invertebrates, USSR translation	16133	translations	1002
fresh water fish, prospects in USSR	17805	Achilles heel of Soviet economy, agriculture	5907
high altitude, pyridine nucleotide oxidases and transhydrogenase activity	4410	ACIC, <i>see</i> Aeronautical Chart and Information Center.	
man to Far North and subtropics of South, USSR study	20773	Acids, <i>see</i> names of acids.	
to moderate hypoxia, modified tissue resistance accompanying	17691	Acleris, <i>see</i> Moths.	
water organisms, abiotic and biotic factors, significance of environment, USSR study	14154	Acorns, shumard and swamp chestnut oak, test of arsan-endrin rodent repellent	12184
Accountants:		Aconitic flow, <i>see</i> Flow.	
CPA laws and regulations, provisions, summary	18555	Acoustical insulation, <i>see</i> Insulation.	
examination announcements	1937, 7780, 11661, 20377	Acoustics, <i>see</i> Sound.	
amendment	11659		

# INDEX 1963

	Entry
Acquisition of probabilistic discrimination between subsequent alternative events.....	9614
ACR series..... 7365, 11151, 12945,	18224
Acreege allotments, <i>see</i> Agricultural products— <i>also</i> names of products.	
Acreege-marketing guides..... 2,	4330, 5779-81, 14814
Acrylate, <i>see</i> Polymethyl acrylate.	
Acta architecturae Sinica (Chinese periodical):	
translations..... 801, 908,	14098
Acta astronomica Sinica (Chinese periodical):	
translations..... 16109	
Acta geographica Sinica (Chinese periodical):	
articles..... 10502	
translations..... 8917,	16084
Acta architecturae Sinica (Chinese periodical):	
translations..... 14403	
ACTH, <i>see</i> Adrenocorticotrophic hormone.	
Actinides, sulfides, crystal-chemical properties, USSR study.....	1061
Actinomycetes, water supplies, isolation and enumeration.....	16532
Actions at law:	
cooperative cases, summary.....	4220
litigation releases, Securities and Exchange Commission.....	3872
packers and stockyards act, monthly report.....	3999
<i>see also</i> Civil procedure—District Courts.	
Activation analysis, <i>see</i> Radioactivation analysis.	
Actomyosin:	
medical tests on protein myosin, USSR study.....	6068
use in muscle defect replacement, USSR study.....	17984
Actors' Equity Week, <i>see</i> National Actors' Equity Week.	
Acts of Congress, <i>see</i> Law.	
Actuarial study series..... 14696-697,	18311
Actuaries, cost estimates for hospital insurance bill.....	18311
Actuaries Board, retirement and disability fund, report, 1962.....	15187
Acuity, visual, comparison of measurement by sight-screener and Sloan letter chart.....	14673
Acute conditions, incidence and associated disability, United States, July 1961-June 1962.....	14675
Ad Hoc Committee on Federal Office Space, <i>see</i> Federal Office Space Committee.	
Adabelle Lykes (SS):	
luncheon ceremony (remarks).....	3049
Adak, Alaska, aircraft accident.....	13314
Adami, L. H., heats of formation of crystalline hydrates of ferrous sulfate.....	16332
Adams, Apollonia O., address, Nov. 12, 1963.....	21079
Adams, Bert K., needed, better school financial accounting.....	19108
Adams, Clyde M., Jr., dynamics of wetting in brazing and soldering.....	12966
Adams, Ernst W., heat transfer in laminar flows of incompressible fluids, etc.....	5577
Adams, Hannah M., organization for child welfare services.....	11644
Adams, James J.:	
measured variation in transfer function of human pilot in single-axis tasks.....	20986
measuring human transfer functions.....	11059
simulator study of active control systems for spinning body.....	3139

	Entry
Adams, James J.—Continued	
simulator study of satellite attitude control system using inertia wheel and magnet.....	19930
Adams, R. J.:	
VHF-UHF missile and space-research radar with 150-ft. steerable antenna.....	12950
Adams, Robert J.:	
Antarctic stress and vitamin requirements.....	7194
closely supervised oral hygiene program.....	7190
Adams, Robert P., fused hafnium carbide.....	19874
Adams, William C., United States seaports, Atlantic Coast.....	19817
Adams, William Y., Shonto, study of role of trader in modern Navaho community.....	16812
Adams County, Iowa, soil survey report.....	13054
Adams National Historic Site, general information.....	3184
Adaptations, tunnel diode static inverter to higher input voltages.....	1372
Addicts, <i>see</i> Narcotic habit.	
Additives:	
agglomeration, effect of oxidizer particle size during combustion.....	1280
feed, needs of dairy cattle.....	14837
infrared spectra.....	20296
motor-oil, antioxidation effectiveness.....	18513
Address language in computer programming, USSR.....	6979
Addresses (mail matter), <i>see</i> Mail matter.	
Addresses, lectures, etc.:	
aerospace medicine lectures.....	16780
Army Management School, selected speeches, 1961-62.....	11534
Bulgarian Communist Party, 8th congress.....	945
by—	
Ables, Robert J.....	10933
Adams, Apollonia O.....	21079
Aebersold, Paul C.....	18610
Aldit, D. N.....	14235
Alexander, Donald W..... 10930,	10932, 18059
Aptaker, Edward.....	16312
Arey, Will.....	5763
Armistead, N. L.....	20665
Aspinall, Wayne N.....	18947
Atkins, C. H.....	1402
Bacilek, Karol.....	2536
Baker, John A.....	5835, 14888, 14890, 14894, 18443, 20283
Balderston, C. Canby.....	12122
Barr, Joseph W.....	14760
Barrett, Ashton C..... 2262,	19190
Bartley, Robert T.....	2256
Batt, William L., Jr..... 18531-532	
Beck, Clifford K.....	18605
Beckman, Norman.....	11423
Begab, Michael J.....	18708
Behrman, Jack N.....	18746
Belin, G. d'Andelot.....	20215
Bellow, Saul.....	16303
Benline, Arthur J.....	1414
Berkofsky, Louis.....	1733
Bishop, Sidney W.....	20023
Bodine, John W.....	1427
Boyd, Alan S.....	1930
Braderman, Eugene M..... 5091,	6585, 6623, 10328-329, 14070, 18749, 19353.
Brandt, Allen D.....	1424
Breimyer, Harold F.....	9529
Brezhnev, Leonid I.....	17803
Broullire, John M.....	10149
Brown, Gerald A.....	1340, 5631

# JANUARY-DECEMBER

Addresses, lectures, etc.—Continued	Entry
by—continued	
Bullitt, John C.	7487
Burroughs, L. C.	1420
Cafferty, Michael J.	20371
Cass, Millard	14435
Cepero Bonilla, Raul	2706
Chadwick, Donald R.	1401
Chapin, Arthur A.	9021, 19775
Chass, Robert L.	1423
Choybalsan, H.	5249
Clague, Ewan	1184
	5461, 10911, 16293, 18030, 20932
Clapp, Norman M.	9375, 13038
Cleary, Ansel R.	94
Cleveland, Harlan	14710-711
Close, Marion C.	11326
Collins, Ralph T.	9042
Colwell, Robert C.	10306
Cooper, Marcus F.	4408
Crafts, Edward C.	1379
	3247, 5665, 7380-81, 12967, 21065
Dane, J. Dewey	13105
Daniels, Draper	6054, 9786
Day, J. Edward	5670
Day, James V.	8237, 10159-160
Dean, Arthur H.	1796
deLaittre, John	493, 20667
Dillon, Douglas	1576
	3387, 5760, 7494-95, 7497, 9468, 11356-357, 11359-360, 13106, 14754, 18355, 20214-217, 21148-149
Dixon, G. Ervin	18754
Duan, Le	15832
Duncan, John P., jr.	17
	1668, 16728
Eaton, William W.	18758
Eskildsen, C. R.	15545
Falk, Hans L.	1416
Fanning, John H.	5630, 7321
Faught, C. K.	9791
Faulkner, Raiford L.	11594
Feldsman, William	19971
Finger, Harold B.	4500
Fontana, M. G.	7592
Ford, Frederick W.	10116
	13904-905
Foster, William C.	4441
Fowler, Henry H.	5759
	7498-7500, 9469-70, 11362-363, 14759, 16634, 18356
Freeman, Orville L.	18-19
	22, 41-42, 44, 1669-78, 1687-89, 1696, 1716-17, 1721-24, 5809-13, 5841, 7554-56, 9558-60, 11464, 11468, 13038, 14846-848, 14854, 20271-275, 20282, 20292-293
Fumich, George, jr.	1195
Gardner, Richard N.	5727
Gifford, Chloe	3300
Giles, Robert E.	6052
Gilmore, Volt	5762, 11366
Godfrey, Horace D.	1666-67
Goldberg, Arthur J.	7133
Goldy, Daniel L.	200
	9776, 9778, 9780, 11633
Goodwin, Robert C.	13875
	71405, 19122
Goshen, Edward E.	4429
	5902, 7653, 14931
Griswold, S. Smith	3275
Gronouski, John A.	20024
	21068, 21070-73
Hammerman, Herbert	1182
Harlee, John	10156-157
	19188-189, 19191
Havas, Nick	15414
Haworth, Leland J.	9700
Hendrickson, E. R.	1421
Henning, John F.	3012
	9029, 19779-780
Henry, E. William	2253
	4885, 12097

Addresses, lectures, etc.—Continued	Entry
by—continued	
Hock, Joseph R.	3050
Hockersmith, Forrest D.	8421
Hodges, Luther H.	201-202
	1958, 4645, 4649-50, 4653, 6045-47, 6049, 6053, 6055, 7805, 7808, 9770-75, 9777, 9785, 9788, 11682, 11686, 13337-343, 13347, 15122, 16963-964, 18755, 18757, 20391
Holloman, J. Herbert	1960
	4646-48, 15138
Holton, Richard H.	7809
	11688, 13345, 18752, 18759
Holum, Kenneth	19347
Jaffe, Leonard	18115
Jenkins, Howard, jr.	21038
Johnson, Hugh A.	2141
Johnson, Jesse C.	4501
Johnson, Lyndon B.	12972
Jones, Lawrence	3049
Keeling, Gerald F.	9612
Kelly, John M.	8370
Kennedy, Harold W.	1425
Kent, Donald P.	617
Khrushchev, Nikita	17838-82
King, Harold	526, 2279
Kleeb, Harold W.	21039
Knapp, Joseph G.	6381
Kotin, Paul	1416
Kozlov, F. R.	8880
Kromer, George W.	2140
Kuhli, Ralph	4929
Ladd, David L.	1383
	3251, 9322, 164.4, 16481, 20018
Lamale, Helen H.	18046
Landsberg, H. E.	1417
Lane, William H.	19816
Lansdale, Edward G.	18534
Lasky, S. G.	11671
Leedom, Boyd	9231
Lingle, Walter L., jr.	10970
Lodge, George C. (French language)	5429
Loevinger, Lee	17428
Lyon, A. W.	9779, 13380
McConnell, Beatrice	16697
McDermott, Edward A.	392
McDowell, M. R. C.	7313
MacGowan, Charles F.	10313
MacIntyre, Everette	4934
MacKenzie, Vernon G.	3271, 7409
McMurray, Joseph P.	494
	499, 4890-91, 6403, 8231, 10150, 19171-72, 19175, 20670
Macy, John W., jr.	18730
Mann, Thomas	10304
Manvel, Allen D.	7526-27
Martin, Clarence D., jr.	4652, 6051
	9784, 13352, 15124, 18756, 20392
Martin, Edwin M.	5906, 7435
Martin, Wm. McC., jr.	2272
Mehren, George L.	20270-281, 20290
Merrick, Samuel V.	18019
Metz, Elmer E.	505
Meyers, Joseph H.	19338
Minetti, G. Joseph	13315, 20372
Minow, Newton N.	480, 4888, 10114
Mitchell, George W.	527, 6440
	10181, 10183, 12128, 17435, 19207
Mitchell, James P.	7138
Miyamoto, Kenji	5152
Morgan, Roy L.	4054, 6044
	7809, 18747, 20390
Morton, James G.	13348
Moscoso, Teodoro	12260
Moynihan, Daniel P.	14432, 19776
Murphy, Charles S.	1727
	5814, 7586, 11446, 14849, 14889, 16734, 16760, 20276-278
Murphy, Robert T.	9734
Myers, Lawrence	9556
Myers, Robert J.	7178, 9082
Neruda, Pablo	6637A

# INDEX 1963

Addresses, lectures, etc.—Continued by—continued	Entry
O'Brien, John A.-----	20666
Oganovic, Nicholas J.-----	13327
Ordman, Arnold-----	16429
-----	19972-973, 21037
Owens, James M.-----	18631
Parrino, Paul S.-----	21080
Pennington, Maitland S.-----	10931
Perez, Maximo A.-----	2521
Peterson, Esther-----	9022-24
-----	9515, 14433, 18018
Pittman, Steuart L.-----	6019, 7776
Plowman, E. Grosvenor-----	7813
-----	9787, 9792, 13349, 18750, 18753
Potter, W. T.-----	9095
President Kennedy-----	1577
-----	2023, 7434, 13232, 13234, 13932
-----	14934-935, 16819, 18536, 20145
Ramey, James T.-----	143
-----	4499, 18602, 18604
Reed, James A.-----	11361
Renne, Roland R.-----	9557, 9566
Roberts, Kenneth A.-----	1426
Robertson, J. L.-----	530, 10182, 19206
Rodenbliser, H. A.-----	1418
Rossa, Robert V.-----	3388
Roosevelt, Franklin D., Jr.-----	9781, 18748
Rotterus, Victor-----	4433, 11527
Rothman, Stuart-----	3181, 5629, 11113
Rowley, James J.-----	11358
Royer, John H., Jr.-----	18751
Rusk, Dean-----	1511, 9402-4, 11299
Saxon, James J.-----	4658, 6059, 9794
Schriever, B. A.-----	4395
-----	4399, 9620, 11509
Schwartz, Harry S.-----	498
Serlven, L. Edward-----	204
Seaborg, Glenn T.-----	1844-45
-----	1848, 5951, 5954, 9693-95, 9698
-----	11587, 11591, 11593, 13249
-----	13251, 16863-864, 18607, 18609
Semenov, N. N.-----	1051
Shaw, Byron T.-----	1662
Sheppard, Harold-----	1786, 1788
Shayton, William L.-----	5764, 21151
Smith, Maynard E.-----	1422
Smith, Ralph G.-----	1419
Smith, S. R.-----	7538
Spicer, William S.-----	1415
Stakem, Thomas E.-----	2263
-----	4901, 10155, 10158, 12112
Stern, Robert L.-----	4651
Stevens, Lawrence N.-----	1378
Stevenson, Adlai E.-----	1513
-----	1577, 1795, 9399
Surrey, Stanley S.-----	7496
-----	7501, 20209, 21150
Terry, Luther L.-----	18291
Tibbitts, Clark-----	18368
Timmons, John F.-----	1728
Tremmel, Ernest B.-----	18608, 18611
Troxell, Margaret M.-----	1784
Truman, Harry S.-----	524, 19200
Udall, Stewart L.-----	6575
-----	10309-310, 14052, 14054-56
-----	17548, 20750-751
Ulbricht, Walter-----	19695
Van Hoboken, Anthony-----	1190
Watt, Bernice K.-----	1645
Weaver, Robert C.-----	5042, 19777
Webb, James E.-----	12888
Weiss, Leonard-----	16568
Wells, A. A.-----	9697
Wells, Jean A.-----	14807
Whitton, Rex M.-----	1453
-----	3304, 9367, 20116, 20119, 21099
Williams, Harold W.-----	4432, 11525
Williams, Joseph J., Jr.-----	8230
Wilson, Robert E.-----	1846-47
-----	11592, 20329
Wirtz, W. Willard-----	1155
-----	3010-11, 3014, 5426-27, 7136
-----	9025-26, 9028, 10883, 12773
-----	14434, 14436, 1625, 19778

Addresses, lectures, etc.—Continued	Entry
Children's Bureau 50th anniversary celebration-----	7771
Chinese lectures on class struggle in rural areas, translations-----	14426
delivered at Party Central Commit- tee Plenum, USSR-----	5267
FMC SP series-----	505, 2262-63
-----	4901, 10155-160, 12112, 19188- 191
Harmon memorial lectures in mili- tary history (series)-----	13194
Ho Chih Minh's speech at Nam Dinh Party chapter confer- ence, translation-----	15721
Israeli Abdu't 'Avodah Convention, Sept. 1962-----	2606
MA SP series-----	3049-50
-----	9094-95, 10930-933, 16312
-----	18059, 19816
military cold war education and speech review policies, hear- ings, index-----	2085
NASA-University Conference on Science and Technology of Space Exploration general sessions-----	5535
public speaking, PACAF basic bibliographies-----	11511
river basin planning seminar pa- pers, May 27-31, 1963-----	20651
scientific manpower, 1962, papers delivered at annual confer- ence-----	16447
space science and physics teacher, papers presented at University of Maine-----	19900
why a nuclear test ban treaty?-----	11530
works for oral delivery, copy- righted-----	2107
-----	Jan.-June 1962-----
-----	July-Dec. 1962-----
Aden, Gulf of, sailing directions-----	3204
Adham, Mohammed, relief-----	11930
-----	15216, 17008
Adhesion, ice frozen to clean and lubricated surfaces-----	11174
Adhesives:-----	
Federal item identification guides for supply cataloging, sup- plements-----	3657
testing, methods, Federal stand- ard-----	537
Adirondack, Mountains, geology-----	2348
Adjustment Board, National Railroad, see National Railroad Adjust- ment Board.	
Adjutant General's Office:-----	
Army Library-----	
selected current acquisitions-----	4322-23
selected periodical literature-----	9522
Adkins, A. W., storage, servicing, transfer, and handling of hy- drogen-----	1742
Adkison, W. L., geology and coal re- sources of Salysville North quadrangle, Ky-----	10274
Administration, see Administrative management.	
Administration network analysis sys- tem-----	13881
Administrative Conference of United States:-----	
create-----	
hearings-----	15392
report-----	20596
selected reports-----	15342
print as Senate document, re- port-----	11990
Administrative management:-----	
AFSC management conference pro- ceedings, 1962-----	11481
Army management views (speeches)-----	11534



	Entry		Entry
Administrative management—Con.		Administrative rule making, <i>see</i> Administrative procedure.	
Army National Guard technical program, NGB pamphlet	19955	Administrators:	
continuity of corporate management in event of nuclear attack	11652	Air Force Department, civilian career opportunities	1748
East Germany, new system, guidelines	16097	Army Department, civilian job opportunities	11531
Federal Government, cost reduction through better management	7723	hospital, employment outlook	20933
Federal regulatory agencies, suggested improvements, hearings	13661	scientist, salary rates, examination announcement, amendment	4626
Forest Service, management systems, description	4084	Administrator's guide, graduate fellowship program	11127
management research summary series	1446-86	Admiral's House, and its occupants, 1909-61, general information	9260
list	11268	Admixtures, polydispersal, propagation, influence of turbulent scattering along vertical and in direction of wind	1018
manpower procedures handbook, Army pamphlet	14944	Adolescents, <i>see</i> Youth.	
National Park Service development program, plan for the management	7336	Adoption, foreign children, guidance manual for service couples, DOD pamphlet	7660
national security policies and programs—		Adrenal cortical extract:	
basic issues	4778	adrenocortical responses in patients scheduled for operative dentistry and impacted surgery	7639
bibliography	4779	use of adrenal cortical hormones on individuals exposed to effect of ionizing radiations, USSR study	10767
selected papers	2094	Adrenal glands:	
Naval Personnel Bureau, personnel administration, functions, etc.	14631	catecholamine release from adrenal slices and rate of respiration	20311
Navy Department, review	16471	catecholamine storage granules, number in adrenal medulla	4414
Navy management review	3952	function, effect of ascorbic acid under influence of high ambient temperature, USSR study	14413
nursing personnel, using skills to best advantage (address)	21079	human sympathoadrenal responsiveness in autumn, winter, and spring	16804
PACAF basic bibliographies, management, excluding personnel	18492	mice, effect of cold ambient temperature upon weight	18475
personnel, code of Federal regulations	6420	significance to heat resistance of organism, USSR study	5142
personnel, dissertations and theses	6029	Adrenalin, effects on ear vessel in cold- and warm-adapted rabbits	18470
personnel information bulletin of VA	4015	Adrenocorticotrophic hormone:	
personnel literature	4016	protective effects of pretreatment in traumatic shock	14919
personnel management series	15116-18735	use on individuals exposed to effect of ionizing radiations, USSR study	10767
190		Adrenocortin, adrenocortical response to oral surgery, effect of time of day on dental patients undergoing surgery	75
personnel methods series	190	Adsorbents, nonuniformity of surface, adsorbate-adsorbate interaction in adsorption properties of solids, USSR study	934
personnel selection and utilization, supervisor development program, basic course	4444	Adsorption:	
PERT guide	19084	cesium on clay minerals	5017
planning and control techniques, PERT, CPS, etc., bibliography	7739	data, linearization	1229
positions in Federal departments, etc., examination announcement	1949	mechanism of action of certain acid corrosion inhibitors, USSR study	1040
public management sources	4116	strontium sorption by crandallite, studies	8333
safety policy statements, guide	4928	tissue adsorptivity, shifts in acute radiation sickness, USSR study	17655
schools, staff personnel, administration, practices and issues	8187	Adult education, <i>see</i> Education—Vocational education.	
skills of management and supervision, analysis and inventory	10103	Adult physical fitness, program for men and women	16488
small business—		Adults:	
management aids for small manufacturers	1444-45, 5716, 7426	civil defense education program	12055
annual compilation	20127	disabled in childhood, social security benefits	13049
management series	7428	inhabitants of high altitudes, electrocardiographic and vectorcardiographic observations	71
management talent, recruitment	1458	Advanced waste treatment research (series)	11245
starting and managing series	1491, 3326, 14690		
Soviet legal measures on personnel administration	5185		
staff development—			
public welfare agencies	16696		
supervisor's job	17539		
suggested management guides	1492		
systems and procedures, notebook for systems man	8373		
Administrative Office of United States Courts, report, 1962	9523		
Administrative personnel, <i>see</i> Administrative management.			
Administrative procedure:			
Government offices, investigation—expenses, report	6250		
report	8059		
State education organization, separation of powers at administrative level	6344		

# INDEX 1963

	Entry		Entry
Adverse action, law and regulations, annotated-----	16949	Advisory Committee on Standard Budget Research, report-----	19805
Advertising:		Advisory Committee on Training of Teachers of Exceptional Children, establish, report-----	13579
advertising alert-----	3419	Advisory Committee on Voluntary Foreign Aid:	
American industry's challenge in new mass markets (address)-----	9771	activities of registered agencies-----	14074
expenses, allowance and allocation in renegotiation-----	3311	overseas relief and rehabilitation, partnership of U.S. Government and voluntary agencies-----	12259
fair landmarks (statement)-----	4934	register of agencies-----	14073
false, in District of Columbia relating to alcoholic beverages, prohibit-----		Advisory Council on International Monetary and Financial Problems, see National Advisory Council on International Monetary and Financial Problems	
hearings-----	15306	Advisory groups, July 1, 1963, Vocational Rehabilitation Administration-----	14767
report-----	20489	AE-CL (Series)-----	3510
joint ads FTC advisory opinion-----	9949	Aehersold, Paul C., remarks, July 26, 1963-----	18610
hearing-----	17119	AEC, see Atomic Energy Commission	
procedures and practices of agricultural commodity promotion groups-----	1703	Aeration:	
retail stores, bibliography-----	14688	extended, in sewage treatment, preliminary evaluation-----	16523
small retail stores-----	1479	portable recirculation system for fumigating bulk products in freight cars-----	13172
television and radio, opportunities for small business, report-----	2045	Aerial delivery, research activities at Armed Forces Food and Container Institute, technical reports and articles, bibliography-----	9368
volume and expenditures, bibliography-----	18307	Aerial mapping, analytic aerotriangulation, technical bulletin-----	1956
Advisory Board of National Capital Airports Corporation, establish, hearings-----	15320	Aerial photography:	
Advisory Commission on Information:		accuracy of ground point location-----	17481
report, 1962-----	7525	Arctic meteorology photo probe, polarized light experiment-----	16364
departmental edition-----	7858	cloud interpretation from satellite altitudes-----	14900
Advisory Commission on Intergovernmental Relations:		geographic study of terrain, USSR study-----	12514
actions taken, summary-----	16702	inland waters, USSR study-----	19465
annual report-----		interpretation, USSR textbook-----	6850
1962-----	4324	Novosibirsk Institute of aerial surveying, etc., 30th anniversary, USSR study-----	19420
1963-----	4325	panoramic, optical compensation of linear displacement, USSR study-----	2664
appropriations, 1964, hearings-----	7985	Project Sedan analysis-----	14996
commission report (series)-----	9997	soil trafficability forecasting-----	13885
current work program and reports adopted through Aug. 1, 1963-----	14813	television cloud photography, meteorological satellite data, catalog-----	14800
general information-----	16700	TIROS II-----	11407
public employee retirement credit transferability among Government units, report-----	18373	TIROS IV-----	13990
recommendations, to Aug. 1, 1963-----	9524	volume inventories, test of classifications in forest management-----	6492
releases-----	16701	volume tables, constructing-----	4983
Advisory Commission on International Educational and Cultural Affairs:	4034	volume tables for pinyon-juniper stands-----	
American studies abroad, special report-----	18374	see also Aerial mapping	
report on exchange-of-persons program-----	18375	Aerial pickup, see Air-to-surface pickup	
Advisory Committee of Users of Educational Statistics, report-----	6341	Aerial radiometric survey-----	14995
Advisory Committee on Development of College-Level Technical Education:		Aerial surveys, see Aerial photography	
establish-----		Aerial unloading kit modification KMU-154/E-----	18457
hearings-----	9930	Aerial vehicles, see Aircraft	
message from the President-----	4720	Aerodex, Inc., use of former Govt surplus parts without authorization under Army Dept. contract, GAO report-----	20726
Advisory Committee on Development of Graduate Education:		Aerodynamic heating:	
establish-----		effect on flutter of thin flat-plate arrow wings-----	11064
hearings-----	9930	flat-faced conical nose, heat transfer measurements at Mach nos. to 14.6-----	14535
message from the President-----	4720		
Advisory Committee on International Organizations:			
report on technical cooperation program of United Nations system-----	20169		
staffing international organizations, report-----	20168		
Advisory Committee on Oceanography, appoint, report-----	15262		
Advisory Committee on Public Health Service Personnel Systems, report-----	7411		

	Entry		Entry
Aerodynamic heating—Continued		Aerodynamics—Continued	
flat-faced cylinder, free-flight data		see also Aircraft — Airplanes —	
at Mach nos. to 10.9.....	14534	Boundary layer—Camber (air-	
flat single-bay panels, effects of		craft) — Flow — Flutter (air-	
thermal stress and buckling on	1290	craft) — Heat transfer — Lift	
flutter characteristics.....		(aircraft) — Load (mechan-	
glass shields of re-entering ICBM,		ics) — Missiles—Spacecraft—	
heating and melting process at		Stability of aircraft — Wings	
stagnation point.....	11037	(aircraft).	
heat transfer to blunt conical bodies		Aeroelasticity:	
having cavities to promote separ-		aerodynamic loading characteristics	
ation.....	14590	of thin-trapezoidal-wing-body	
helium film cooling on hemisphere		combination.....	16362
at Mach no. of 10.....	1211	symposium, Göttingen, Apr. 16-17,	
missile stabilizers, tests.....	11002	1957.....	19941
nylon as ablative material for bal-		Aeroembolism:	
listic missiles.....	10095	associated with development of pul-	
tests, in methane-air combustion		monary cysts precipitated by	
products and in air.....	1299	decompression.....	9104
thermal protection materials at		caisson disease, prophylaxis and	
moderate heating rates and		treatment, translations from	
high total heat loads.....	16382	Russian book.....	12680
wing leading edge, influence of in-		decompression sickness—	
ternal modifications on tran-		anesthetized dogs, circulatory	
sient temperature rise.....	16354	and respiratory changes.....	9630
X-15 airplane, skin and structural		syndrome in historical perspec-	
temperatures during flight.....	18133	tive.....	7191
Z-function solutions for motion,		gaseous tissue nitrogen of rats ex-	
etc., during atmosphere entry		posed to simulated altitude and	
from equatorial orbits of rotat-		high concentration of nitro-	
ing planet.....	5583	gen.....	16790
Aerodynamics:		Aeroflex Corporation, Aeroflex Labo-	
behavior of spheres ablating under		ratories Division, pricing of	
constant conditions, study.....	11030	spare parts under contract	
blunt bodies at transonic speeds,		with Navy Dept., GAO review.....	593
aerodynamic characteristics.....	10986	Aerographer, mate, 3 & 2, Navy train-	
characteristics of full-scale propeller		ing course.....	14624
tested with rigid, flapping		Aerolonization, effect on organism,	
blades, and cyclic pitch con-		USSR studies.....	19602
trol.....	11054	Aerolons and their use in medicine,	
characteristics of X-15/B-52 com-		USSR.....	871
bination.....	5339	Aerology:	
coefficients from Newtonian expres-		daily aerological cross sections, pole	
sions for conic and spheric		to pole along meridian 75° W	
bodies at combined angles of		for IGY..... 7506.9492,	14778
attack and sideslip.....	11089	Soviet aerological measurement.....	2524
cone configuration at Mach no. 6.77		Aeromagnetic maps, surveys, etc.,	
at angles of attack up to 180°.....	7265	see Maps and charts.	
effect of cross-section shape on		Aeromagnetic reconnaissance, of Cook	
bodies at Mach numbers from		Inlet area, Alaska.....	6553
2.50 to 4.63.....	7275	Aeromedical evaluation for space	
equations for Newtonian static and		pilots.....	14897
dynamic aerodynamic coeffi-		Aeromedical Research Institute, see	
cients for body of revolution		Civil Aeromedical Research In-	
with offset center-of-gravity		stitute.	
location.....	14546	Aeromedical reviews..... 4409. 5884-87,	
ground effect machines, experimen-		7628, 16788-789, 18499, 20309	
tal studies.....	3385	Aeromonas, bacterial fish diseases.....	4956
interaction effects ahead of rectan-		Aeronautical and Space Sciences Com-	
gular sonic jets exhausting per-		mittee, Senate:	
pendicularly from flat plate.....	11069	calendar.....	3847
low-wave-drag hypersonic body, ef-		committee print.....	324
fects of cross-section shape on		hearings..... 8088, 13789, 15371-372	
low-speed aerodynamic charac-		investigations and studies, aero-	
acteristics.....	19929	nautics and space activities,	
space vehicles, papers.....	7234	authorization, report.....	6238
static characteristics—		report.....	15358
blunt bodies, effects of nose		Aeronautical Chart & Information	
bluntness, fineness ratio, cone		Center:	
angle, etc.....	11058	bulletin.....	3420
rocket-vehicle configurations at		bulletin digest.....	14898
Mach numbers from 1.80 to		technical report.....	1731
4.63.....	14579	Aeronautical charts, see Maps and	
short blunt cones, transonic in-		charts.	
vestigation of effects of nose		Aeronautical instruments, develop-	
bluntness, etc.....	16399	ment of aircraft instruments,	
short blunt 10° semivertex angle		parts and elements, history,	
cone in helium.....	5600	USSR study.....	5149
transonic of blunt cone-cylinder		Aeronautical lighting, see Lights and	
body with flared afterbodies.....	10994	lighting.	
		ARL series.....	9594
		mathematical statistical research,	
		history.....	4400

# INDEX 1963

	Entry
Aeronautical supplies:	
aircraft specifications-----	3445
lease air service equipment, agree- ment with Federal Republic of Germany-----	21125
spare parts, noncompetitive pro- curement within Air Force Dept., GAO follow-up re- view-----	13995-996
Aeronautical Systems Division:	
technical documentary reports-----	47,
5848-52, 7587-96, 9595-98, 11470-476, 13195-196, 14809, 16767, 18448-449, 20295-300,	
technical notes-----	9599
abstracts, Apr.-Dec. 1961-----	5883
technical reports-----	56,
1767-68, 4391-94, 5870-74, 7597-7602, 9600-1, 16768,	
abstracts, Apr.-Dec. 1961-----	5883
Aeronautics:	
activities of Federal depts., etc., in- vestigation, authorization, re- port-----	6238
aeronautics and space, bibliog- raphy-----	
adults-----	19886
elementary grades-----	19884
secondary grades-----	19885
agreement with Switzerland-----	3362
airman's guide-----	
Pacific supplement-----	3447
United States-----	3448
supplement-----	3604
Army aviation-----	
accident prevention pamphlet-----	9658
digest-----	4256
use of meteorology, technical manual-----	20327
aviation-----	
and astronautics conference in Israel, translations-----	12398
fixed base operation, starting and managing-----	8326
forecasts, fiscal years 1963-68-----	2241
joint financing of air navigation services in Greenland and Fa- roe Islands, agreement with other Governments-----	14724, 16591
news (periodical)-----	3474
radio services, FCC rules and reg- ulations-----	6399, 12100
safety officer, examination an- nouncement, discontinuance notice-----	4622
scheduled services, agreement with Jamaica-----	9410
transport services, agreement with-----	
Colombia-----	14720
New Zealand-----	16596
chart updating manual-----	5875
charts and publications of ACIC, monthly bulletin-----	3420
civil aeronautics manuals-----	474-476, 2242, 6389-90, 8212-13, 10105, 13892, 15465, 17418, 19161,
status-----	481, 4884, 12096, 20660
civil air regulations-----	6391, 15466
amendments-----	2243-45, 4879-80, 6392, 8214-15, 10106- 109, 15467, 17419, 19162-163, 20657,
special regulations-----	4201
civil aviation-----	
compilation of laws-----	16919
Government publications, price list-----	20087
law of July 31, 1963, East Ger- many, translation-----	17714
world survey, Nordic area-----	5985
Coast Guard aviation facility re- quirements, opportunities for economies, GAO report-----	15596
code of Federal regulations-----	12115, 13926-928

	Entry
Aeronautics—Continued	
crop dusting, problems in aerial ap- plication-----	16866
events of 1962, NASA report-----	13669
FAA statistical handbook of avia- tion-----	17422
Federal aviation act of 1958-----	
amend-----	
hearings-----	12012
report-----	17271
enforcement procedures, FAA regulations-----	13895
rule-making procedures, FAA regulations-----	8219
text-----	16919, 18712
Federal aviation regulations-----	478-480, 2247-52, 4883, 8219, 10112-113, 13894-901, 15473, 17423-424,
status-----	481, 4884, 12096, 20660
international notams-----	3798
international weather schedules, service O, ATS handbook, change-----	89
lease of equipment, agreement with Federal Republic of Germany-----	21125
memorandum for aviators-----	3894
NASA operations, semiannual re- port-----	
departmental edition-----	7300
document edition-----	6091
NASA program, industry confer- ence-----	9143
naval aviation-----	
Government publications, price list-----	20087
news-----	3944
safety review-----	3460
notice to aviators-----	3972
NROTC aviation cruise manual, 1963-----	11147
plane sense, general aviation infor- mation-----	20689
research, investigation, authoriza- tion, report-----	6114
rules of practice in economic pro- ceedings, CAB procedural regu- lations-----	11650
speed as factor in progress, list of records, 1906-61-----	8186
statutes and related material, com- pilation-----	16919
United States activities, report, 1962-----	4719, 7304
VHF communications in air trans- portation, Czechoslovakian study-----	12570
see also Air navigation—Aircraft— Flight—also certain headings beginning Air.	
Aeronautics and associated equip- ment, see Aeronautics.	
Aeronautics and Space Administra- tion, National, see National Aeronautics and Space Admin- istration.	
Aeronomy:	
planetary-----	18119-123, 19890-898
USSR activities, 1960-62-----	19579
USSR research-----	19375
Aeroradioactivity survey and areal geology of—	
Georgia nuclear laboratory area, northern Georgia (ARMS-1)-----	15552
Oak Ridge National Laboratory area, Tennessee and Kentucky (ARMS-1)-----	1827
Aeroradioactivity survey and related surface geology of parts of Los Angeles region, Calif. (ARMS- 1)-----	5927
Aerosols, and air ions interaction, dose-effect relationships-----	7197
Aerospace, see Outer space.	
Aerospace maintenance safety-----	7603

# JANUARY-DECEMBER

	Entry
Aerospace Medical Research Laboratories, technical documentary reports -----	7604, 11477, 20301
Aerospace medicine, <i>see</i> Medicine.	
Aerospace Research Office:	
basic research resumés, 1961-62 ----	7621
index of research results -----	3981
OAR series -----	4400, 7621, 14915, 16782
Aerospace safety (periodical) -----	3422
Aerotriangulation, <i>see</i> Aerial mapping.	
AET, protective action on radio-mimetic effect caused by oleic acid oxidation products, USSR study -----	16151
AFCRL, <i>see</i> Air Force Cambridge Research Laboratories.	
AFFTC, <i>see</i> Air Force Flight Test Center.	
Afghanistan:	
around world with Bob Poage, report on recent trip to -----	2046
economy, basic data -----	2420
education, commission for educational exchange and financing programs, agreement -----	20189
Iran boundary, study -----	20151
labor conditions -----	18047
Peace Corps program, agreement -----	1538
technical cooperation, agreement -----	7449
AFIT, <i>see</i> Air Force Institute of Technology.	
AFL-CIO, <i>see</i> American Federation of Labor and Congress of Industrial Organizations.	
Africa:	
abbreviations used, corrected version -----	6806
African series -----	3338,
7432, 9393-94, 11290-292, 13060,	
16567, 18322, 20142-143.	
American doctoral dissertations on, list -----	3044
briefing, hearing -----	11897
contributions to hydrology of Africa and Mediterranean region (series) -----	14037
east -----	
living conditions -----	12257
preparing shipments to -----	8380
east coast, lights and fog signals, list -----	9259
education, African women educators project report -----	14072
flight information publication, terminal low altitude -----	3709
foreign operations appropriations, 1964, hearings -----	18918
foreign relations of U.S., 1942 -----	
departmental edition -----	13066
document edition -----	11735
health information for travel in -----	16497
mining industry, transport problems in central and south basins, USSR study -----	15870
monetary situation, gold and dollar reserves -----	12053
north -----	
flight information publication -----	
enroute high altitude -----	3690
enroute low altitude -----	3694
planning, air traffic control procedures -----	3699
northwest, sailing directions, change -----	14619
Pan-African and Guinean events reported in Guinean Democratic Party daily, Horaya, Sept. 4-11, 1962 -----	1043
problems and prospects, bibliography -----	103
raw materials, strategic significance in U.S. planning -----	1776
real issues in unfinished struggle for freedom -----	7432

	Entry
Africa--Continued	
Saharan peoples, changes since 1954, translations -----	7112
sales frontier for U.S. business, international commerce, supp. -----	8375
southwest coast, sailing directions, change -----	7349
Soviet training programs -----	6345
students from Africa, West German assistance -----	5365
sub-Saharan, agricultural development schemes, bibliography -----	18053
translations -----	878, 5125,
5219, 6779, 8584, 10839, 12532,	
14092, 14386, 15793, 15943,	
16051, 16070, 19463, 19549.	
Meghreb, industrialization and unity -----	15918
Perregaux district in Algeria, economy -----	12328
survey of post-independence Algeria -----	12388
visit to native Congolese king -----	12567
U.S. Information Service activities, hearing -----	7996
United States foreign aid program, report of study -----	19055
United States foreign operations report -----	8021
print as Senate document, reports -----	6273, 7918
United States policy, assistance, etc. -----	13060
USSR scientific research conference on coordination of work -----	1037
west coast -----	
lights and fog signals, list -----	11140
tide tables -----	11674
west, community development stories -----	12261
African languages, Foreign Service Institute basic courses, announcement -----	11216
<i>see also</i> Hausa language--Yoruba language.	
AFSC, <i>see</i> Air Force Systems Command.	
AFSWC, <i>see</i> Air Force Special Weapons Center.	
Afterburners:	
ramjet engine, using gaseous hydrogen as fuel at Mach number 3.0 -----	3106
use of combined compressor injection and afterburning in turbojet engine for thrust augmentation -----	5513
wall temperatures, effect of pressure level -----	5527
Afterglow, plasma, with application in nitrogen, investigation -----	21008
AFVA, <i>see</i> Visual aids.	
Agadir Province, Morocco, demographic, geographic and economic data -----	5299
Agassiz, Louis, correspondence with Spencer F. Baird -----	14691
Age:	
discrimination prohibited in private employment, State laws, May 1963 -----	14446
limits in appointments to U.S. Park Police, report -----	8064
mobility of population by age, 1960 -----	1878
young men, changes with age in serum lipid concentrations -----	9628
Aged:	
action for aging, bibliography -----	2358
aging (periodical) -----	3423
aging population, trends 1950-60, projection 1970 -----	9505
bills affecting older persons, introduced 88th Congress, 1st session -----	9508-9, 11410, 16693-694

Do not order from index; see indicated entry

Page 71



# INDEX 1963

Entry	Entry
Aged—Continued	Aged—Continued
centenarians, by sex and State, 1960.....	senior citizens programs, compilation of materials relevant to message of the President.....
Conference of State Executives on Aging, 1962, proceedings.....	State legislation enacted in 1962, highlights.....
elderly citizens of our Nation, message from the President.....	university and education program for aging (address).....
facts on aging series.....	Agency for International Development, <i>see</i> International Development Agency.
Federal financial assistance programs.....	Agents, <i>see</i> Foreign agents—Lawyers.
Federal legislation affecting older persons, 87th Congress, 2d session.....	Agey, W. W.: effect of ions common to natural water on flotation of limestone.....
food guide for older folks.....	flotation and sintering studies on manganese ores stockpiled at Deming, N. Mex., and Weaden, Ariz.....
frauds and quackery affecting older citizen, hearings.....	Agglomeration, additive, effect of oxidizer particle size during combustion.....
health care, estimated expenditures, 1960-61.....	Aggregates: concrete, compacted weight as measure of workability, tests.....
Health, Education, and Welfare Dept. programs for senior citizens in 1962.....	fine grading, influence on properties of concrete, laboratory investigation.....
housing— direct loans— design guides.....	Agigea Station for Marine Zoology, Rumanla.....
fact sheet.....	Aging, <i>see</i> Aged—Gerontology.
Federal law, excerpts.....	Aging Office, activities covered.....
law.....	Aging population, <i>see</i> Aged.
reports.....	Aging, Special Committee on, Senate: activities and accomplishments, report.....
public, program for senior citizens, fact sheet.....	print additional copies, report.....
reading list for architects.....	committee prints.....
senior citizens, census, 1960, final report.....	continued authority, etc., report.....
senior citizens, insured loans for rental housing in rural areas.....	hearings.....
Swedish projects offer ideas for Americans.....	report.....
human aging, biological and behavioral study.....	Agnew, Allen F., geology of Platteville quadrangle, Wisconsin.....
income— elderly population, statistics.....	Agostini, Enrico, and son, relief.....
marital status and household relationship.....	Agreement on tariffs and trade, <i>see</i> General agreement on tariffs and trade.
older people, 1960-61.....	Agricultural adjustment act, <i>see</i> Agriculture.
retirement income, hearings.....	Agricultural and Industrial Chemistry Bureau, records, preliminary inventory.....
State variations.....	Agricultural chemicals, <i>see</i> Chemicals.
living arrangements of older persons, 1950 and 1961.....	Agricultural chemistry, Southern Utilization Research and Development Division, publications and patents, semiannual list.....
marriage trends of older persons, and characteristics of older brides and grooms.....	Agricultural colleges, <i>see</i> Land-grant colleges.
medical assistance, Kerr-Mills program, evaluation report.....	Agricultural commodities, <i>see</i> Agricultural products.
medical assistance program, District of Columbia Govt., delay in development and implementation, GAO review.....	Agricultural conservation program: national bulletin, 1963.....
medical care expenditures for persons 65 and over.....	reserve contracts, release of land.....
mental disorders of the aging.....	statistical summary, 1961.....
Office of Aging and the many faces of age.....	summary by States, 1961.....
older handicapped workers, vocational rehabilitation.....	Agricultural credit: bank and PCA lending to farmers.....
patterns for progress in aging, case studies, list.....	bank examiner looks at agricultural lending.....
planning for later years.....	code of Federal regulations.....
President's Council on Aging annual report, the older American.....	cooperative farm credit system, functions and organizations.....
problems, developments, 1959-63— hearing.....	farm debt as related to value of sales.....
report.....	farm debt picture, new look.....
print additional copies, report.....	farm mortgage debt and farm taxes, report.....
publications relating to nursing homes and care, list.....	Farmers Home Administration— loans, general information.....
relocation of elderly people, hearings.....	record, 1962.....
role of education in field, conference report.....	
selected Government publications on various interests, price list.....	
selected references on aging.....	

# JANUARY-DECEMBER

	Entry
Agricultural credit—Continued	
Federal farm loan act, etc.-----	213
see also Production credit associa-	
tions.	
Agricultural Economics, periodic re-	
ports, list-----	4372
Agricultural economics, see Agricul-	
ture.	
Agricultural Economics Bureau, farm	
management records-----	7309
Agricultural economists, see Econo-	
mists.	
Agricultural engineering, SCS na-	
tional engineering handbook-----	20139
Agricultural experiment stations:	
additional facilities, assist States—	
law-----	15153
reports-----	9884, 13725
State—	
agricultural research, questions	
and answers-----	13163
funds for research-----	9537, 10025-26
workers in agricultural subjects-----	14850
Agricultural finance, see Agriculture.	
Agricultural geography of China-----	2719
Agricultural hydrology, see Hydrol-	
ogy.	
Agricultural implements, see Farm	
implements and machinery.	
Agricultural insurance:	
crop insurance—	
coverage, expand, report-----	17249
statutes, compilation-----	1683
Agricultural laborers, see Farm labor.	
Agricultural lands, see Land.	
Agricultural loans, see Agricultural	
credit.	
Agricultural machinery, see Farm im-	
plements and machinery—	
Tractors.	
Agricultural marketing agreement act,	
see Agricultural products.	
Agricultural Marketing Service:	
activities (periodical)-----	3425
AMS series-----	3-7,
1615-17, 4331-35, 5783-87,	
7528-34, 9525-30, 11424-427,	
13136-150, 14816-823, 16703-	
705, 18376-382, 20258-260.	
appropriations, 1964, Agriculture	
Dept., hearings-----	9021
50 years of marketing, commemora-	
tive exhibit-----	9528
marketing research directory-----	4335
milestones in marketing, 50 years	
of services-----	9530
news service, direct teletypewriter	
hook-up-----	13150
poster-----	7535
regulations, inspection and certifi-	
cation of processed fruits and	
vegetables, etc-----	13152
reports, checklist-----	3509
service and regulatory announce-	
ments-----	9534-35, 18387
services for you-----	13186
Agricultural marketing specialists,	
examination announcement,	
discontinuance notice-----	16936
Agricultural outlook, see Agriculture.	
Agricultural periodicals, see Periodi-	
cals.	
Agricultural policy, see Agriculture.	
Agricultural products:	
acreage diversion, statutes, compli-	
cation-----	1683
agricultural commodities, agree-	
ment with—	
Argentina-----	5740
Bolivia-----	7440, 9417, 11311, 13080, 13083
Brazil-----	14716, 21129
Burma-----	3348
Chile-----	3345, 7451, 11321, 14723

	Entry
Agricultural products—Continued	
agricultural commodities, etc.—con.	
China-----	1520, 5732, 9432, 9435
Colombia-----	20175
Congo (Leopoldville)-----	1523,
1533, 1550, 5734	
Cyprus-----	16604
Dominican Republic-----	7456, 20172
Ecuador-----	16580
Ethiopia-----	16585
Greece-----	7444
Guinea-----	18332
Iceland-----	11314
India-----	3363,
9408, 11328, 16606, 21128	
Indonesia-----	7452, 16603
Iran-----	11319, 20185
Israel-----	1515,
1531, 1548, 5733, 11315, 14725	
Italy-----	1532
Japan-----	16593
Korea, Republic-----	3356,
16597, 16609, 20174	
Mexico-----	1522
Morocco-----	7447
Pakistan-----	5738, 20183
Paraguay-----	9419
Philippines-----	9431
Poland-----	16588
Portugal-----	16612
Ryukyu Islands-----	13073, 14727
Tunisia-----	1558, 21134
Turkey-----	1553, 7442, 13084, 20170
United Arab Republic-----	9405
Vietnam-----	7454, 11322, 20188
Yugoslavia-----	1516, 5735, 9407, 16598
agricultural prices (periodical)-----	3427
carload waybill statistics, 1961-----	6627,
8427	
CCC monthly sales list-----	3502
consumed by factories-----	4889
costs of operating exempt for-hire	
motor carriers, pilot study in	
Delaware, Maryland, and Vir-	
ginia-----	8152
export expansion (address)-----	20273
fallout and your farm food-----	4308
farm enterprise input-output data,	
publications, list-----	10059
Federal stockpile inventories, report	
foreign trade—	
by commodities—	
calendar year 1962-----	12054
fiscal year 1961-62-----	2138
by countries, fiscal year 1961-62	
digest-----	10057
monthly-----	3717
statistical report-----	3716
with European Economic Com-	
munity-----	3718
fumigation in freight cars, portable	
recirculation system-----	2142
grade names used in U.S. stand-	
ards-----	13172
handling and processing industries,	
evaluation of exemptions under	
fair labor standards act, data,	
errata-----	4346
hauling exempt commodities, opera-	
tions of for-hire motor car-	
riers, nature and extent-----	1590
Latin America, 20 countries, Jamai-	
ca and Trinidad indices-----	4362
marketing—	
activities-----	2135
agreement act of 1937, compila-	
tion-----	3425
bulletins-----	7558
33, 7570, 11456, 13172-173,	
18431	
milestones in Agriculture Dept.	
program-----	14821
publications, price list-----	11225

# INDEX 1963

Entry	Entry
Agricultural products—Continued	Agricultural Research Service—Con.
marketing—continued	picture sheet..... 7551, 18412
research reports..... 34-35,	utilization research and develop-
1701-8, 4357-63, 5826-33, 7571-	ment, 1962 summary report... 11444
76, 9577-82, 11457-460, 13174-	veterinarians—
176, 24863-873, 16746-749,	career opportunities in ARS... 4364-65
18432-435, 20286-287.	duties and responsibilities... 14841
spreads, developments, 1961.... 2124	veterinary medicine, opportunities
measuring effects of weather on	for doctors in ARS... 4364-65
output..... 2125	Agricultural situation, <i>see</i> Agricul-
New Zealand, marketing and trade	ture.
policies, and their bearing on	Agricultural situation (periodical)... 3429
U.S. farm exports..... 17359	Agricultural Stabilization and Con-
perishable agricultural commodities	servation Service:
act—	appropriations, 1964, Agriculture
fair trading in fruit and vegetable	Dept., hearings..... 9921
industry..... 18382	electronic data processing systems,
text and regulations under act... 14830	Kansas City and Evanston
price support—	offices, inadequacies, GAO re-
active and announced programs... 3413	view..... 19281
export and surplus removal,	purchase and sales reports..... 4122
statutes, compilation..... 16683	purchase reports..... 4123
prices, annual summary, 1962.... 16614	sales reports..... 4169
processing, fair labor standards act	soil bank programs in Hidalgo
exemptions, interpretative bul-	County, Tex., GAO report... 10261
letin..... 18365	Agricultural statistics, <i>see</i> Agricul-
production research reports... 40, 1718-20,	ture.
4373-75, 5840, 9587, 13184,	Agricultural supplies:
16756-759.	Federal item identification guides
production response, theoretical ap-	for supply cataloging, sup-
proach and understanding.... 2130	plements..... 3657
promotion—	regional cooperatives handling un-
by agricultural groups..... 7571	der \$10 million of supplies,
by commodity groups, advertising	1960-61..... 15463
procedures and practices..... 1703	Agricultural trade development and
protection by nontariff trade bar-	assistance act of 1954:
riers..... 17357	activities under, semiannual re-
purchase and sales reports..... 4122	port..... 9835, 18805
purchase reports..... 4123	cargo preference act, provisions af-
retail produce operations, layout	fecting sale of surplus com-
principles..... 9578	modities, opinion of Attorney
sales reports..... 4169	General..... 20923
Soviet agricultural trade, 1955-61.	Food for Peace—
standards, U.S..... 15420	creative use of abundance..... 8423
checklist..... 4331	newsletter about activities under
grades of processed fruit, vege-	PL 480..... 10094
tables, etc..... 16703	Library of Congress Public Law 480
strengthening research on utiliza-	project—
tion of agricultural commodi-	accessions list—
ties, report..... 17197	India..... 7182
surplus management (address).... 17	Middle East..... 9089
trade agreement with—	Pakistan..... 7186
India..... 14718	newsletter..... 3866
Peru..... 21132	text and amendments, compilation.
El Salvador..... 14717	transactions under, data compila-
tropical products, foreign agricul-	tion..... 15297
ture circulars..... 3720	Agricultural workers, <i>see</i> Farm labor.
United Kingdom, demand, etc., pro-	Agriculture:
jected level, 1965 and 1975,	agricultural adjustment act,
summary and evaluation..... 17356	amend—
United States..... 357, 3716	hearings..... 11870, 13635-636, 20493,
utilization research, career opportu-	20605
nities..... 16723	laws..... 9808, 15147, 15159
West Germany's domestic agricul-	reports..... 7958, 11821-822,
tural assistance program, eval-	13723, 13780-781
uation..... 15421	agricultural charts, handbook..... 16729
world agricultural production and	agricultural economic reports... 351-352,
trade, statistical report..... 8290	4801-3, 6315-17, 8144-45, 8154,
world agricultural situation, 1963.	10047-49, 12041-44, 13837-840,
<i>see also</i> names or classes of prod-	17354, 19088-89, 20624-625.
ucts.	agricultural economics research... 3424
Agricultural research, <i>see</i> Agriculture.	agricultural outlook digest..... 3426
Agricultural Research Laboratory,	agricultural policy for today's
University of Tennessee, re-	world (remarks)..... 1678
search progress report... 7706, 16851	agricultural prices (periodical)... 3427
Agricultural research scientists, ex-	agricultural research (periodical) 3428
amination announcement..... 15115	agricultural research, strengthen-
Agricultural Research Service:	ing research on utilization of
appropriations, 1964, Agriculture	agricultural commodities, re-
Dept., hearings..... 7979	port..... 17197
ARS series..... 8-13, 1622-44,	agricultural revolution in our midst
4337-43, 5790-99, 7540-47	(address)..... 5841
9537-44, 11431-441, 13155-156,	agricultural situation (periodical) 3429
14832-841, 16711-714, 18390-	agriculture and economic growth,
406, 20261-264.	report of study group..... 10047

# JANUARY-DECEMBER

	Entry
<b>Agriculture—Continued</b>	
agriculture handbooks.....	20-21,
1679-83, 4346-48, 7557-58,	
9561-63, 11447-449, 13162,	
14850-853, 16729, 18413-417,	
20277.	
agriculture in United States and	
Soviet Union.....	19092
agriculture information bulletins.....	1684-
85, 5815-17, 7559, 9564, 11450-	
451, 13163, 16730-732, 18418-	
421.	
aircraft, work accomplished, 1960.....	473
American agriculture looks at At-	
lantic Community (address).....	9566
American, changes (address).....	41
balance sheet, 1963.....	18421
bibliography.....	3479
serial publications indexed in.....	11092
biological science and agricultural	
production, USSR study.....	10780
census, 1959-	
final reports.....	170, 1901-2,
6008, 11637, 13305	
announcement.....	5987
general report, statistics by sub-	
jects.....	
bound volume.....	4592
type of farm.....	171
irrigation of agricultural lands,	
United States.....	170
census publications, price list.....	9334
code of Federal regulations.....	4905,
6411-16, 6421-22, 8242-43,	
8245, 12114.	
<b>Communist China—</b>	
agricultural economy, Red	
China's incentive to change	
commune system.....	2133
animal husbandry and materials,	
translation.....	672
application of biophysics, transla-	
tion.....	14360
communes, technical reform and	
consolidation.....	10410
foundation in development of na-	
tional economy, translation.....	14306
meteorology in service of agricul-	
tural production.....	15936
methodology of division of	
regions.....	2720
regional division.....	14139
situation and crop prospects,	
1963.....	20628
translations.....	650,
665, 915, 926, 1031, 1101, 2578,	
2608, 2640, 2790, 2835, 5376,	
6688, 6737, 6871, 6938, 8457,	
8530, 8596, 8618, 8668, 8843,	
8982, 10448, 10498, 10527, 10689,	
10739, 12387, 12396, 12679,	
14183, 14242, 14247, 15755,	
15900, 15988, 16091, 16117,	
16158, 17757, 17787, 17905,	
19384, 19492, 19558, 19663,	
19699, 19758, 20795, 20890.	
contract farming and vertical inte-	
gration, list of references.....	18182
cooperatives, contributions to agricul-	
tural well-being.....	12094
Czechoslovakia, survey.....	2132
decisions.....	3430
development, as complex process,	
Albanian study.....	14156
development schemes in sub-Saha-	
ran Africa, bibliography.....	18053
East European, translations.....	688,
770, 818, 884, 942, 994, 1050,	
1071, 2498, 2512, 2563, 2671,	
2715, 2765, 2849, 2871, 2927,	
2951, 3000, 5117-18, 5228, 5303,	
5394, 6660, 6727, 6776, 6831,	
6847, 6907, 6926, 6977, 7009,	
7059, 7093, 7111, 8581, 8607,	
8628, 8680, 8725-26, 8780, 8796,	

	Entry
<b>Agriculture—Continued</b>	
East European, translations—cont.	
8818, 8830, 8933, 8961, 10362,	
10421, 10510, 10530, 10543,	
10565, 10577, 10588, 10594,	
10631, 10650, 10740, 10743,	
10781, 10790, 10829, 10833,	
10874, 12394, 12403, 12434,	
12450, 12473, 12541, 12563,	
12647, 12692, 12718, 12729,	
12739, 14091, 14119, 14156,	
14169, 14275, 14316, 14416,	
15686, 15747, 15818, 15876,	
15921, 15958, 15975, 16011,	
16040, 16227, 17653, 17727,	
17758, 17788, 17832, 17870,	
17941, 17978, 19405, 19469,	
19481, 19510, 19542, 19609,	
20783, 20908.	
economics of agricultural enter-	
prises, USSR study.....	8800
education, best farm program of all	
(remarks).....	20278
education, bibliography.....	388
effects of winter and spring,	
reports.....	10530
European Common Market and	
U.S. agriculture.....	565
extension work laws, compilation.....	216
fair labor standards act exemp-	
tions, interpretative bulletin.....	18365
farm policy alternatives, papers.....	10124
farm problems and policies (ad-	
dress).....	20275
farm program, continue and	
strengthen (statement).....	1724
farm relief and agricultural adjust-	
ment acts, compilation.....	212
farming terraced land.....	5822
finance review.....	2122, 15411
Federal and State programs, past,	
present, and future (address).....	20279
foreign agricultural economic re-	
port.....	17359
Foreign Agricultural Service, mis-	
cellaneous FAS-M series.....	4977,
6477-78, 10207, 12148-149,	
13981, 15542-544, 20692.	
foreign agricultural trade, Govern-	
ment financed programs.....	6319
foreign agriculture circulars.....	3720
foreign agriculture economics.....	20628
foreign agriculture, monthly.....	3719
foreign agriculture report.....	10206
foreign agriculture, weekly.....	2305
foreign, publications, price list.....	11225
foreign training, annual summary	
as of June 30, 1962.....	6475
future international meetings,	
world list.....	4314
Hungary, translations.....	731,
2454, 2669, 5227, 6882, 8769,	
8960, 10707, 12605, 14393, 15897,	
17657, 19643, 20876.	
importance in international trade	
(address).....	1727
improving mountain meadow pro-	
duction in West.....	1685
income parity standards.....	2129
international agricultural trade,	
terms used.....	20692
labor productivity calculation, Chi-	
nese study.....	967
large-scale farming in United	
States, census of agriculture,	
1959, special reports.....	13305
Latin America, speech by Cuban	
delegate at FAO conference.....	2706
Latvian SSR, Academy of Sciences,	
institutes.....	10596
legislation, 87th Congress, review.....	4751
manpower in farming and related	
occupations.....	13845
marketing, opportunities for	
strengthening service to pub-	
lic.....	20290

# INDEX 1963

	Entry
Agriculture—Continued	
markets, market structure, and institutional organization of agriculture (lectures).....	9529
mechanization, important problems.....	20791
mint farming.....	5815
Mongolia—	
income and incentives.....	12757
production, status, research.....	10680
outlook for 1963-68.....	2121
positive policy (remarks).....	1717
problems in relationship to world peace and freedom (talk).....	1688
problems in USSR and USA, contrasts (address).....	20271-272
problems, real public understanding of farm proposals (address).....	1668
program, message from the President.....	4721
research, Agriculture Department and State agricultural experiment stations, questions and answers.....	13163
resources and production, graphic summary, census of agriculture, 1959 special reports.....	11637
return to unity needed (address).....	1666
sample survey, 1960, special reports.....	6008
science, technology, and development, papers prepared for United Nations conference.....	633
stabilizing characteristics in American economy (remarks).....	1689
stabilizing factors on farm economy (remarks).....	1667
standardization, experiences, Czechoslovak study.....	17078
State departments, directory, 1963.....	7529
statistical summary.....	4209
statistics, career in Statistical Reporting Service.....	7578
statistics, 1962.....	9560A
statistics, simple methods of estimating nonlinear functions.....	18417
Thailand, diversification and economic development, case study.....	8154
TVA development, 1962.....	7470
United States—	
background facts.....	16745
fact book.....	12242
upswing in rural America.....	11469
USSR—	
Achilles heel of Soviet economy, agricultural sciences, translations.....	8887
biological research.....	6644
comparison with U.S. production, policies, etc.....	12051
development, importance of scientific research.....	12576
development under Communism, statements of N. S. Khrushchev.....	1738-842
labor productivity.....	6915
labor statistics.....	8798
production failures, French study.....	752
research development.....	8708
statistics.....	8465
tasks of agricultural science, decisions of central committee of CPSU.....	6683
translations.....	885,
2595, 2629, 2785, 537, 5218, 8735, 8748, 10542, 10751, 10857, 12429, 12442, 14319, 17693, 17770, 19653.	
vertical coordination in production and market structure, research needs.....	4801
western U.S., long-term production prospects.....	13838

	Entry
Agriculture—Continued	
workers in agricultural subjects in land-grant colleges and experiment stations.....	14850
world agricultural production and trade, statistical report.....	8200
world market, changing concepts (address).....	9557
world situation, 1963.....	2143
Eastern Europe, supplement.....	12047
Far East, Communist China, Oceania, supplement.....	10055
Western Europe, supplement.....	10060
Western Hemisphere supplement.....	8156
world trade and U.S. agriculture (remarks).....	7586
yearbook 1962, separate.....	14895
yearbook 1963—	
departmental edition.....	20291
document edition.....	20452
yearbooks, authoritative information, list.....	11229
see also Farmers' cooperative organizations—Farms—also headings beginning Agricultural.	
Agriculture and Forestry Committee, Senate:	
calendar.....	3848
hearings.....	9993-94,
12003-5, 19041-42, 20604-605	
reports.....	9981,
9987, 13717, 13719-725, 13780-781, 13788, 15362, 17248-249, 17296, 19020, 19034.	
Agriculture Committee, House:	
calendar.....	3829
committee prints. 2040, 4751, 15296-297	
hearings.....	2047,
6181, 7978, 9917-20, 11869-872, 13634-636, 15295, 17154-160, 18915-917, 20493.	
investigations and studies, expenses, reports.....	4735, 6122, 18878
reports.....	7942,
7958, 9884-87, 9897, 11821-822, 11827, 13597, 15250, 15252, 17138-139, 17146, 18839, 18846, 18859.	
travel authorization, reports.....	7972, 17152
Agriculture Department:	
activities, facilities, etc. (address).....	11446
agricultural research, questions and answers.....	13163
appropriations, 1963, supplemental—	
hearings.....	6183, 6289
law.....	6062
proposal.....	4727
reports.....	6116, 6230
appropriations, 1964—	
hearings.....	7979, 9921, 17301-302
reports.....	11816, 17294
Assistant Secretaries, additional—	
hearings.....	13634
reports.....	17146, 18839
budget, 1964, amendments.....	4727, 6092
career for lawyers.....	1709
centennial, 1862-1962, commemorating.....	4378
century of service, the 1st 100 years.....	9567
child nutrition, aids.....	14815
cotton production and exporting problems, role of Government (address).....	20276
employees, first aid guide.....	18415
employees, planning your retirement, guide.....	16751
equal employment opportunity, progress, pictorial review.....	18266
facilitate work—	
hearing.....	17155
report.....	17138



# JANUARY-DECEMBER

	Entry		Entry
<b>Agriculture Department—Continued</b>		<b>Aguilar, Carmen H., relief</b>	<b>17201</b>
field staff, Foreign Service list	1510, 3340	Ahdut Avodah Convention, Sept. 1962, speeches, etc.	2606
50 years of marketing service (address)	20280	Ahrends, Eugene, relief	15202
films for television	14881	AIB series	1681-85, 5815-17, 7559, 9504, 11450-451, 13163, 16730-732, 18418-421.
Gold Seal Conservation Award, presentation (remarks)	16760	AID, see International Development Agency.	
handling of pooled cotton allotments of Billie Sol Estes, hearings	330, 4780	AID report	10925
Institutional meat purchase specifications approved, pork products, cured and processed	16706	Aidit, D. N.: lecture, May 11, 1963	14235
leaflets	30-32, 1699, 4356, 5822-26, 7568-69, 9572-76, 11453-455, 13169-171, 14861-862, 16743-745, 18428-430, 20284-285.	political report to Indonesian Communist Party	12400
marketing bulletins	33, 7570, 11456, 13172-173, 18431, 20288-289	Aids to navigation, see Navigation.	
marketing research reports	34-35, 1701-8, 4357-63, 5826-33, 7571-76, 9577-82, 11457-460, 13174-176, 14863-873, 16746-749, 18432-435, 20286-287.	Aikln, A. C., effect of auroral bremsstrahlung on lower ionosphere	21006
marketing services, 50 years, commemoration, exhibit	9528	Ailerons, wing loads due to deflected inboard ailerons on sweptback wing at transonic speeds	3108
meat inspection procedures, manual	18410	Aines, Ronald O., release of land from conservation reserve contracts, adjustments in land use, farmers' interest in new land-retirement contracts	13830
milestones in marketing	9530, 14821	Ainsworth Unit, see Missouri River Basin project.	
miscellaneous publications	36-38, 1709-15, 4364-66, 5834, 7577-78, 9583-85, 11461-463, 13177-183, 14875-881, 16750-751, 18436-438.	<b>Air:</b>	
nursery stock, plant, and seeds quarantine, proposed amendment, hearings	6182	air screens for insect control	13158
PA [program aid] series	14882-887, 16752-755, 18439-442	aspirator for taking air samples—model 822, USSR study	8704
policies and programs to help farmers solve problems (address)	16728	cleaning system, blast effects, Operation Plumbob	141
poster	18440	equatorial air currents study, balloon flights, agreement with India	3352
production research reports	41, 1718-20, 4373-75, 5840, 9587, 13184, 16756-759.	expired, oxygen content, electromagnetic determining, USSR study	19446
program aid (PA) series	30, 4367-71, 5836-39, 7580-81, 9586, 13185-186.	flutter characteristics of 45° swept-back wing plan-form measured in Langley transonic dynamics tunnel	7273
publications and motion pictures, monthly list	3016	ionization and aerosols interaction, dose-effect relationships	7197
publications and services available, congressional guide	2367	ionization, Soviet equipment, development and production information	12636
publications available, list	17545	microbes, apparatus for determining Czechoslovakian patent	936
radiological monitoring handbook	13162	radionuclides, maximum permissible concentrations for occupational exposure	18185
REA lending programs	9585	salt water/air interface, effects of impressed electrostatic fields	5050
recent motion pictures, 1963 cumulative supplement	11447	temperature, diurnal amplitudes in USSR, atlas	2510
releases	4035	temperature, relationship with soil frost formation	10234
reorganization to consolidate regional offices, etc. (address)	7556	thermodynamic calculations of carbon monoxide-air detonation parameters for initial pressures from 1 to 100 atmospheres	1318, 11043
report, 1962	16761	see also Air pollution—Atmosphere—Atmospheric pressure.	
research and development liaison, with Army Quartermaster Corps, progress report	7417	Air almanac, see Almanacs.	
Sedimentation Laboratory, research program	1714	Air carriers:	
specialized positions, examination announcement, supplement	18736	accidents, statistical review and résumé, 1961	16923
States, marketing service program	1615	air freight's role in developing local economies (remarks)	11525
statistical bulletins	45, 1725-26, 4376, 5842-45, 7582, 9588-90, 11466, 13188, 14891-893, 16763-764, 18444.	airborne ILS glide slope equipment, technical standard order	8221
technical bulletins	46, 1729-30, 4377, 5846, 7583-84, 9591-92, 11467, 13189-192, 16765-766, 18445-447, 20294.	airborne radio marker receiving equipment, technical standard order	13903
tobacco pricing policy, hearings	17160	aircraft certification and operation rules, etc., civil air regulations	15466
USDA, employee news bulletin	4273	airline statistics handbook	1933
Agte, Curt, tungsten and molybdenum	14592	Army maintenance units, field manual	14937
Agua Caliente Spring, geology and hydrology	8346	certificated, accounts and reports, uniform system	11651, 15098

# INDEX 1963

Entry	Entry
Air carriers—Continued	Air Force:
certificated route—	air base gravity network----- 5855
airport activity statistics----- 11648	Air Force systems acquisition in the sixties (address)----- 9612
overseas and foreign and within Hawaii and Alaska, certification and operation rules, civil air regulations amendments----- 6392, 8214-15, 10107, 17419	Air Force visual aid series----- 18456
commercial operator certification and operation rules, civil air regulations----- 6391, 20371	Air police law enforcement operations, Air Force manual----- 1746
compact air transport (address)----- 12203	Air Staff, organization chart----- 3441
D.C. Government, use of 1st-class accommodations, GAO report----- 5672	airman, official journal----- 3446
domestic airmail service, map----- 4127	airman qualification examination, 1962, development, errata----- 7622
financial statistics----- 20373	airmen—
supplement----- 1930	first-term, prediction of unsuitability from various information sources----- 18495
future of scheduled air transportation (address)----- 1930	hierarchical factors in course grades in aviation high school----- 4407
Hawaii, local service in retrospect and prospect (address)----- 20372	prediction of success from responses to Items of Kelley activity preference report----- 64
inspection regulations, FAA maintenance bulletins----- 19165	prediction of technical school success from homogeneous biographical inventory scores----- 67
international transportation rates—	chaplains, administration and program, 1947-60----- 9606
hearings----- 12012	civil engineer (periodical)----- 3438
report----- 17271	classification tests—
international transportation, unification of rules, convention amendments, protocol----- 20513	development, 1963----- 9623
irregular and off route rules—	survey of methods----- 9624
civil aeronautics manual, supp----- 15465	comparison of Air Force aptitude indexes with corresponding talent test composites----- 18496
civil air regulations, amdt----- 10108	Dare County practice weapons range, acquisition, hearings----- 9999
scheduled—	design manual----- 11487
helicopter certification and operation rules civil aeronautics manual, supp----- 10105	drill and ceremonies, manual----- 5864
interstate, certification and operation rules—	employment overseas, pamphlet----- 5867
civil aeronautics manual, supp----- 19161	engineers overseas, pamphlet----- 5868
civil air regulations, amdt----- 10106	enlisted personnel, accessions, aptitude data----- 65
services between U.S. and Caribbean area, agreement with Trinidad and Tobago----- 3357	enlisted personnel, relief----- 13493
traffic statistics----- 3436	flight information publication planning, quarterly, check list----- 3707
supplements----- 3437, 20373	Government publications, price list----- 20087
transport services, agreement with France----- 9430	instructor aptitude test scores compared with general aptitude indexes achieved by sample of basic airmen----- 4405
transportation of dangerous articles and magnetized materials, Federal aviation regulations----- 13901	instructors' journal----- 20308
Air conditioners, unnecessary procurement by Army Dept., GAO report----- 15600	librarians, employment----- 9609
Air conditioning:	materials research and development----- 60
emergency construction, design, engineering manual----- 6372	medal, presentation to Benjamin D. Foulis, authorize—
equipment, current industrial reports, 1962----- 20350	law----- 17037
equipment, Federal item identification guides for supply cataloging, supplements----- 3655	report----- 15208
equipment in Govt. buildings, repeal portion of act of 1943—	officer job evaluation in terms of merited pay versus merited grade----- 16785
hearing----- 17184	Officer Training School students, attitudes and career intentions----- 63
law----- 17048	officers—
reports----- 13715, 17105	effectiveness, importance of situational factors in measurement----- 66
equipment industry, outlook for 1963 and review of 1962----- 4524	job evaluation factors, study----- 18494
Air controlman, see Airport control tower operators.	jobs, feasibility of identifying predictors of success from personnel records, etc----- 4402
Air crews, see Flight crews.	NCO leaders, selection techniques, status, June 30, 1962----- 4466
Air-cured tobacco, see Tobacco.	peer ratings as predictors of disciplinary problems----- 4462
Air cushion vehicles:	promotion, temporary increase in number of lieutenant colonels—
controlled flow phenomena----- 5758	hearings----- 11884
operational analysis of use in support of Army's off-road logistic mission----- 20205	law----- 15142
Air defense, instruction material against chemical and biological weapons in East Germany----- 705	reports----- 13541, 13755
Air flow, see Flow.	relationships between attendance at squadron officer school and later officer effectiveness reports----- 9626

# JANUARY-DECEMBER

	Entry
<b>Air Force—Continued</b>	
officers—continued	
retirement prediction.....	4403
scientific and engineering assignments, role of education in rated effectiveness.....	4404
operating room technician, manual, Pacific, PACAF basic bibliographies.....	18461
5880-81, 9621, 11510-511, 13212, 14916, 18491-492.	62,
personnel—	
household goods shipments, unnecessary costs to Government for packing, GAO review.....	8325
prediction of success in technical training from educational information.....	16784
pilots, hearing, 1955-62.....	4417
procurement instruction.....	3439
recreation specialists, employment.....	16777
recruiting strategy with fluctuating availability and known demand, evaluation.....	4406
register—	
departmental edition.....	4388-89
document edition.....	4712-13
remote sites in Alaska, water supply and waste disposal problems.....	13207
remote sites in Arctic, waste disposal system for small groups.....	18472
research grant program, development.....	14915
research objectives.....	18464
resupply pallet tests.....	5861
sites, engineering weather data, manual.....	16828
supply warehousing-inspection, air-men career ladder, occupational survey.....	1772
transfer of Coast and Geodetic Survey personnel, etc., in emergencies, report.....	11966
weapons system, integrated design for maintainability, guide.....	1767
weather for aircrews, manual.....	52
see also Military education.	
<b>Air Force Academy, Colo.:</b>	
cadets, increase authorized strength—	
hearings.....	13641
reports.....	13611, 13621
catalog, 1963-64.....	9635
<b>Air Force Cambridge Research Laboratories:</b>	
AFCRL series.....	49-50,
1732-40, 4379, 5853-55, 7605-7, 9602-5, 11478-480, 13197-199, 14900-901, 16769-772, 18450-456, 20302-303.	
<b>Air Force surveys in geophysics.</b>	1749-50,
4390	
geodesy and planetary geometry papers, 1962, compendium.....	18454
instrumentation for geophysics and astrophysics.....	59,
5877, 7618, 9816-17, 18490	
report, Jan. 1961-June 1962.....	1735
<b>Air Force Cross:</b>	
award to members of Armed Forces for gallantry in cold war incidents—	
hearing.....	13638
law.....	15156
reports.....	13537, 13775
<b>Air Force Department:</b>	
AAL technical documentary reports.....	1751-66, 11488-503, 13203-206, 14907-912, 18467-483.
AAL technical notes.....	11504-506,
13207, 14913	
ACIC technical report.....	1731

	Entry
<b>Air Force Department—Continued</b>	
additional costs from procurement of test equipment as special tooling under contracts awarded Lockheed Aircraft Corporation Missile and Space Division, GAO report.....	15590
AFCRL series.....	49-50,
1732-40, 4379, 5853-55, 7605-7, 9602-5, 11478-480, 13197-199, 14900-901, 16769-772, 18450-456, 20302-303.	
AFFTC technical documentary reports.....	1741,
5856-63, 7608-9, 9607, 11482-485, 13200-201, 14902-905, 16773, 18457, 20304.	
AFFTC technical information handbooks.....	12036, 16774
AFFTC technical information memorandum.....	7610
AFFTC technical reports.....	1742
AFSWC technical documentary report (series).....	11487
Air Force manuals.....	51-52,
1743-47, 4380-85, 5864-66, 7611, 9608, 11486, 16775-776, 18458-461.	
<b>Air Force pamphlets.</b>	53-55,
1748, 4386-87, 5867-69, 7612-16, 9609, 13202, 14906, 16777-778, 18462-464, 20305-306.	
<b>Air Force regulations.</b>	20307
<b>Air Force surveys in geophysics.</b>	1749-50,
4390	
aircraft spark plugs, uneconomical utilization and premature disposal, GAO review.....	8324
AMC technical report.....	18466
appropriations, 1964, military construction, hearings.....	15298
ARL series.....	9594
ASD technical documentary reports.....	47,
5848-52, 7587-96, 9595-98, 11470-476, 13195-196, 14899, 16767, 18448-440, 20295-300.	
<b>ASD technical note.</b>	9599
<b>ASD technical reports.</b>	56,
1767-68, 4391-94, 5870-74, 7597-7602, 9600-1, 16768.	
Capehart housing projects, unnecessary costs incurred because of administrative negligence and poor design in construction, GAO review.....	20721
careers for civilians, scientists, engineers, etc.....	1748
contracts with—	
Boeing Co., overpricing of target seeking systems for Bomarc missile, GAO review.....	8318
Servomechanisms, Inc., price increase for ballistic computers resulting from excessive estimated material costs, GAO report.....	15593
Western Electric Company, Inc., in construction of White Alice communications system, equipment rentals, GAO examination.....	10269
electronic data processing equipment, leasing vs. buying, GAO review.....	10266
ESD technical documentary reports.....	58, 1769-70, 4396, 9614-15, 11507, 14914, 18486-487.
Falcon missile components, excessive costs included in prices under negotiated contract purchased from Avco Corp. by Hughes Aircraft Co., GAO report.....	20714

# INDEX 1963

	Entry		Entry
Air Force Department—Continued		Air Force Reserve, air reservist	
GETOL research program final re-		(periodical)-----	3440
port-----	21141	Air Force Special Weapons Center,	
instrumentation for geophysics and		technical documentary report-----	11487
astrophysics-----	59,	Air Force supplies, <i>see</i> Military sup-	
5877, 7618, 9616-17, 18490		pplies.	
Jet aircraft engines, management		Air Force Systems Command:	
by Air Training Command in		AFSC management conference pro-	
ground training programs,		ceedings, 1962-----	11481
GAO review-----	592	PERT handbook-----	1774
lunar charts and mosaic series-----	1771,	press releases-----	4036
5878-79, 7619-20, 9618-19,		scientific information activities--	12935
11508, 13210-211, 16781,		Air inlets (aircraft):	
noncompetitive procurement of		axisymmetric double-cone external-	
aeronautical replacement spare		compression inlet in Mach num-	
parts, GAO follow-up review--	13995	ber range 2.07 to 1.48, perfor-	
OAR series-----	4400, 7621, 14915, 16782	mance of Mach no. 3.0 de-	
Personnel Research Laboratory,		sign-----	18128
technical documentary reports--	63-	circular internal-compression inlets	
67, 1772-73, 4401-7, 5882-83,		with translating centerbodies	
7622-26, 9622-26, 11512, 13213,		employing boundary-layer re-	
16783-787, 18493-496,		moval at Mach numbers from	
personnel research reports--		0.85 to 3.50-----	10982
1954-57, abstracts-----	5882	designed for inlet-engine matching	
1958-61, abstracts-----	5883	up to Mach 3, performance at	
petroleum storage in commercial		Mach 3.07, 1.89 and 0-----	16355
facilities, San Francisco area,		external-internal-compression, per-	
unnecessary annual expendi-		formance of turbojet engine	
tures, GAO report-----	15509	in combination with-----	5562
RADC technical documentary re-		in-flight gains realized by modifying	
ports-----	11513, 18497-498	twin side-inlet induction sys-	
report, 1962-----	10038	tem-----	10978
School of Aerospace Medicine, re-		nose, isentropic, performance at	
search report-----	68	Mach number 5.6-----	14531
translation series-----	85,	supersonic, ramp-type side inlet	
1777-78, 7641-45, 13220-221,		with ram-scoop throat bleed	
14923, 18508-521, 20314-315,		and varying fuselage boundary-	
unreasonably high prices for nickel		layer removal, Mach no. 1.5	
cadmium aircraft storage bat-		to 2.0, performance-----	5523
teries under contract with So-		variable 2-dimensional, designed for	
natone Corporation, GAO re-		engine-inlet matching-----	5521
view-----	17514	Air lines, <i>see</i> Air carriers.	
use of public lands at Cuddeback		Air mail:	
Lake Air Force Range, provid-		domestic transportation system,	
ing for withdrawal, etc., for		map-----	5672
defense purposes--		6-cent precanceled postal card	
law-----	13420	(poster)-----	7388
reports-----	7940, 12000	8-cent stamp, in sheet, coil, and	
WADC technical report-----	9636	booklet form (poster)-----	1387
WADD technical reports-----	86-87,	Air Materiel Command, technical re-	
1779-80, 4424, 5893, 7646-49,		port-----	18466
9637-39, 11515-518,		Air National Guard, <i>see</i> National	
Air Force Flight Test Center:		Guard.	
Baker-Nunn satellite tracking sta-		Air navigation:	
tion-----	11485	facilities, U.S. standard flight in-	
bibliography of technical publica-		spection manual-----	12142
tions, etc., 1952-62-----	5863	flying training, Air Force manuals,	
technical documentary reports-----	1741,	82, 5865	
5856-63, 7603-9, 9607, 11482-		Greenland, Faroe Islands, and Ice-	
485, 13200-201, 14902-905,		land, joint financing of services,	
16773, 18547, 20304,		agreement with other Govern-	
technical information handbook-----	12036,	ments-----	14724, 16591
16774		inertial systems, USSR study-----	7099
technical information memorandum		long distance techniques usable by	
technical report-----	1742	nonmilitary ocean-crossing air-	
Air Force Installations, <i>see</i> Installa-		craft, study and analysis-----	11595
tions (military).		navigator (periodical)-----	3950
Air Force Institute of Technology,		private aircraft, practical informa-	
officers training, career experi-		tion-----	15476
ences of AFIT classes-----	9625	spacecraft-----	5545
Air Force Logistics Command:		Tacan (tactical air navigation),	
realignment of item management		facts-----	9289
responsibilities pursuant to im-		<i>see also</i> Aeronautics.	
plementing of Federal cata-		Air navigation equipment, <i>see</i> Aero-	
loging program, GAO review--	10269	nautical supplies.	
uneconomical use of parts kits, to		Air pilots, <i>see</i> Aviators.	
support depot overhaul activ-		Air police, <i>see</i> Military police.	
ities, GAO report-----	14007	Air pollution:	
Air Force Medical Service, digest--	4255	automotive exhaust pollutants--	
Air Force Nurse Corps, <i>see</i> Nurse		development of depleted-uranium	
Corps, Air Force.		catalysts for destruction-----	4490
Air Force Personnel and Training		effect of lead deposits on cat-	
Research Center, AFPTRC-		alysts-----	14509
TR and AFPTRC-TN series,		motor vehicle emissions and their	
abstracts, 1954-57-----	5882	effects, conference report-----	1412
		motor vehicles, and public health--	1413

# JANUARY-DECEMBER

	Entry		Entry
Air pollution—Continued		Air Pollution, National Conference	
bibliography	3274	on, see National Conference	
biometeorology	1417	on Air Pollution.	
by ferrous metallurgical enterprises,		Air raid shelters, see Protective	
prevention, USSR	7041	shelters.	
cause, effect, and control, charts	3209	Air raids, surface-to-air missile bat-	
control—		talions for air defense, agree-	
cleaner air through community		ment with Japan	21121
action	1427	Air reservist (periodical)	3440
community approach, role of of-		Air service, see Aeronautics—Air	
officials (speech)	3275	carriers.	
coordination of public and pri-		Air speed:	
rate efforts to achieve better		low subsonic, highly swept delta	
application of techniques (ad-		wing, longitudinal aerody-	
dress)	1424	namic characteristics	1289
economic considerations	1419	low-wave-drag hypersonic body, ef-	
engineering knowledge as factor,		fects of cross-section shape on	
status	1423	low-speed aerodynamic charac-	
mechanics of legislative and		teristics	19929
regulatory action	1425	rough air effect on crew perform-	
meteorological knowledge as fac-		ance, simulated low-altitude	
tor, status	1422	high-speed surveillance mis-	
municipality and home	1414	sion	16398
Federal Government's role	1426	subsonic—	
Federal Government's activities	3281	aerodynamic effects of modify-	
control programs—		ing wing inboard trailing-edge	
extend, strengthen, etc., hear-		camber of model	12879
ings	17330	investigation of longitudinal aero-	
staff study	17333	dynamic characteristics at an-	
control research and technical as-		gles of attack —4° to 100° of	
sistance, extend act, hearings	11907	delta wing reentry configura-	
effects on crops and livestock	1418	tions	11010
fission product radioactivity, along		subsonic and low supersonic, re-	
80th meridian (west), 1961	16461	entry vehicle with retractable	
health effects from repeated ex-		wings, wind tunnel investiga-	
posures to low concentrations		tion	11007
of pollutants	3283	subsonic and supersonic, calibra-	
lung cancer morbidity, USSR study	5396	tions of pressure-type airspeed-	
lung cancer relationship (address)	1416	altitude systems of X-15 air-	
measurements of national Air Sam-		plane	7291
pling Network, analyses of		supersonic slender cone-cylinder	
suspended particulates, 1957-		bodies at angle of attack of 8°	
61	3269	with one body rotating, free-	
measuring and monitoring activi-		flight heat transfer investiga-	
ties, assignments of responsi-		tion	14541
bility	1421	transonic—	
measuring and monitoring pro-		basic pressure measurements of	
grams, needs, objectives, capa-		North American research air-	
bilities, and limitations	1420	plane	11005
municipal ordinances, digest	3278	blunt bodies, aerodynamic char-	
National Conference on Air Pollu-		acteristics	10986
tion panels—		lenticular-shaped reentry vehicle,	
applying our control equipment		static longitudinal aerodynamic	
and meteorological control		characteristics	11008
know-how	1422-24	wing loads due to deflected in-	
applying our measuring and		board ailerons on sweptback	
monitoring know-how	1420-21	wing	3108
applying our present know-how		transonic and supersonic lift and	
in air pollution control	1425-26	drag of swept-wing fighter	
applying our public information		airplane	10983
and sociological know-how	1427	Air-to-surface pickup, retracting Ful-	
industrial, power plant, and		ton skyhook yoke on Army type	
municipality	1414-19	CV2B (Caribou) aircraft	20207
national problem, major aspects	3270	Air traffic:	
needs for research and control		activity, FAA airways system—	
(address)	3271	summary 1962	8216
New Orleans asthma, report, pre-		summary 1963	17421
liminary	1400	air carrier statistics	3436
Poland, study	8814	supplements	3437, 20373
power industry's part in cause and		airspace requirements for super-	
control (remarks)	7409	sonic transport, simulator	
prevention and control, clean air		study	18156
act—		control—	
hearings	17330	automatic data processing sys-	
reports	13609, 13619	tem for UNIVAC file com-	
public health hazard	3272	puter 1 basic logic, descrip-	
Public Health Service program	3273	tion	18345
research, projects 1962, guide	3282	concepts, procedures, etc.,	
respiratory health, relationship		EDPDF experimental labora-	
(address)	1415	tory for testing	18344
State laws, digest	1404	contractions used by FAA, etc.,	
tomorrow is already here	3298	handbook	9641
woman's viewpoint (speech)	3300		



# INDEX 1963

	Entry		Entry
Air traffic—Continued		Aircraft—Continued	
control—continued		certification and operation rules	
facility operations, ATS manu-	4425,	for supplemental air carriers,	
al	5896, 5898, 9640, 11519, 13223-	commercial operators using	
	226, 18522.	large aircraft, land certificated	
in these hands	6395	route air carriers engaging in	
procedures, changes	3442	charter flights or other special	
system requirements	5894	services, civil air regulations	15466
test of bi-directional computer		certification, identification, etc.,	
updating equipment	5751	civil aeronautics manual, supp	17418
enroute IFR survey, peak day,	17420	certification, marking, etc., civil air	
1962		regulations amendments	15467,
flight information publication, plan-			19162
ning, control procedures		circular plan form, with peripheral	
Canada and north Atlantic	3702	jet for lift, thrust and control,	
Europe and north Africa	3699	wind tunnel tests	7245
Pacific and southeast Asia	3703	civil aircraft register	17466
holding pattern criteria, FAA regu-		civil, radiological protection and	
lations	4882	decontamination	562
long distance navigation techniques		companies, backlog of orders, cur-	
usable by nonmilitary ocean-		rent industrial reports	3575
crossing aircraft, study and		components and accessories, Fed-	
analysis	11595	eral item identification guides	
North Atlantic region, survey 1962-	9455	for supply cataloging, supple-	
rules, civil air regulations	4878	ments	3660
supplements	6388, 8211	composite construction for flight	
security control, FAA regu-		vehicles, design procedures, mili-	
lations	485, 13899	tary handbook	19080
special rules and airport patterns,		control-display integration pro-	
Federal aviation regulations	13897	gram	5876
Air Traffic Service:		conveyances, validity of titles, hear-	
aircraft accident notification pro-		ing	17172
cedures, etc.	10102	Defense Dept. military procurement	
communications procedures, manual,		appropriations, 1964—	
changes	1781,	hearings	6187, 8092, 11873
	11520, 13222, 14926, 18525	law	11720
facility operation, manual,		reports	6142, 6161, 8073, 9902
changes	90, 4426, 5897	divergent-shroud aircraft ejectors,	
fact book	5895	performance	5519
manuals	90,	dusts and dusting, Piper PA-25	
	1781, 4425-26, 5896-99, 9640,	Pawnee distribution patterns	18398
	11519, 13222-228, 14924-925,	earnings, relief from double tax-	
	16809, 18522-524.	ation, agreement with Iceland	7453
Air transportation, see Aeronautics—		Federal item identification guides	
Air carriers—Transportation—		for supply cataloging, supple-	
Travel.		ments	3660
Air University:		filamentary structures, theory and	
periodical index	3443	applications	3163
quarterly review	3444	flight vehicles	
review	18465	composite construction, fabrica-	
Air University Library, index to mili-		tion, durability, and repair,	
tary periodicals	16779	military handbook	12038
Air vehicles, see Aircraft.		structures, metallic materials and	
Air warfare, electronic warfare prin-		elements	12037
ciples, Air Force manual	51	forgings, noncompetitive procure-	
Airborne ILS glide slope equipment		ment from ALCOA, GAO re-	
(for air carrier aircraft)	8221	port	15595
Airborne operations, utility truck de-		fuel-tank design for liquid hydro-	
livery by air, delay of Army in		gen	10973
equipping, GAO report on un-		general aviation inspection aids,	
necessary costs	12217	summary	15475
Air carriers, see Air carriers.		general operating and flight rules,	
Aircraft:		Federal aviation regulations	13896
aerial unloading kit modification,		general operations rules—	
KMU-154/E	18457	civil aeronautics manual, supp	2242
airborne radio marker receiving		civil air regulations, amendment	4880,
equipment, technical standard			10109
order	13903	German aerospace industry	7107
aircraft and aircraft engines, cur-		GETOL configuration, ground ef-	
rent industrial reports	3574, 7752	fect take-off and landing feasi-	
airworthiness, FAA directives	3635,	bility and potential, research	
	17427	program	9465
Army crew seat design criteria,		glasses, properties at elevated tem-	
crash injury evaluation	13099	peratures	9636
BAK-6/F-27A arresting barrier ab-		hot cycle research, preliminary de-	
sorber evaluation	16773	sign study	14750
canopy-fuselage configurations,		IFR altitudes, Federal aviation reg-	
force and pressure measure-		ulations	15473
ments	5531	imported—	
		certificates of air worthiness,	
		agreement with—	
		Japan	11309
		Switzerland	3362

# JANUARY-DECEMBER

	Entry
<b>Aircraft—Continued</b>	
imported—continued	
certification and approval, etc.,	
civil air regulations amend-	
ment .....	19163
in agriculture, 1960 .....	473
industry, research and develop-	
ment, 1956-61 .....	11132
inspection—	
aviation aids, supplements .....	3753
aviation mechanics handbook .....	17425
labor market developments .....	13874
litter installation, dynamic test,	
experimental research .....	13098
loan, agreement with Saudi Arabia .....	20182
maintenance bulletins, FAA hand-	
book—	
large aircraft .....	19165
small aircraft .....	19166
maintenance certification proce-	
dures, FAA handbook .....	19164
maintenance crews, weather factor	
effects in Arctic area .....	18482
maintenance, electricity funda-	
mentals, Air Force manual .....	1743
maintenance supervisor's manual .....	18556
management cost accounting, FAA	
handbook .....	19168
manned nuclear propulsion program	
of Atomic Energy Commission	
and Defense Department, GAO	
review .....	6534
manufacturing, industry, outlook	
for 1963 and review of 1962 .....	5968
Navy, failure of Navy Dept. to use	
excess spare parts and assem-	
blies in production, GAO re-	
view .....	5003
noise, ground effect, persons and	
property, investigation—	
hearings .....	6198
report .....	6117
nuclear propulsion, 3 cycles .....	5511
obstruction marking and lighting	
standards .....	484
ocean-crossing, long distance navi-	
gation techniques, study and	
analysis .....	11595
oil analysis system for operational	
use in field, feasibility investi-	
gation .....	14749
operating personnel, personal fitness	
assessment, sample field test .....	16867
operations, research problems .....	7261
private, facts of flight, information	
about operation .....	15472
propulsion, nuclear powered super-	
critical-water cycle, analysis .....	7230
quickening terms for improved bi-	
nary angle of attack display,	
method for establishment .....	11154
reinforced plastics for primary	
structure .....	9467
rocket research program, major	
events and achievements,	
1946-62 .....	5862
scheduled services between U.S. and	
Caribbean area, agreement with	
Trinidad and Tobago .....	3357
spark plugs, uneconomical utiliza-	
tion and premature disposal by	
Air Force Dept., GAO review .....	8324
special flight permits, civil air regu-	
lations amendment .....	19162
specifications .....	3445
spoiler-type controls on trapezoidal	
wing pressure distributions and	
aerodynamic characteristics .....	3107
static dischargers .....	20297
static-pressure systems, calibrations	
by ground-camera and ground-	
radar methods, test program .....	18163

	Entry
<b>Aircraft—Continued</b>	
steels under stress concentration at	
elevated temperature, effect of	
cadmium plating .....	5893
supersonic transports—	
airspace requirements, simulator	
study .....	18156
high-speed cruising flight, study	
with piloted simulators of han-	
dling qualities requirements .....	11075
supplemental type certificates and	
replacement parts, summary,	
supplements .....	4221
support equipment, general han-	
dling & safety manual .....	11193
T-37C qualitative spin evaluation .....	14904
tilt-duct VTOL, research, transi-	
tion and hovering flight char-	
acteristics .....	1291
transform equations of motion to	
standard form, measure state	
of system, etc .....	1316
transport—	
commercial, at altitudes up to	
40,000 ft with autopilot in	
altitude hold, random devia-	
tions from stabilized cruise	
altitudes .....	14587
furnishing Paraguay assistance	
to increase air transport capa-	
bility of air force, agreement .....	1543
transportation, maintenance units,	
Army manual .....	14937
utilization, Coast Guard opportuni-	
ties for economies, GAO re-	
port .....	15596
vehicular measurements of effective	
runway friction .....	9456
vortex wakes in relation to	
terminal operations .....	9185
<b>V/STOL—</b>	
deflected slipstream, flight char-	
acteristics .....	14575
wing and flap loads, wind-tunnel	
investigation .....	11029
wing pressure measurements	
within propeller slipstream for	
wind-tunnel model simulating	
transition .....	29995
<b>VTOL—</b>	
fixed-wing, tilt-duct research	
model, flight operating prob-	
lems and aerodynamic and per-	
formance characteristics .....	14557
impinging uniform jets .....	14753
model of aerial vehicle supported	
by 2 unshrouded propellers,	
flight, etc., investigation .....	18157
pressure distributions on surface	
of flat plate induced by cold	
air jet .....	7276
propellers in descent, tests .....	7292
X-22 research and development	
contract award, hearings .....	15374
<b>VTOL-STOL linearized theory of</b>	
wind-tunnel jet-boundary cor-	
rections and ground effect .....	1322
weapons system reliability and	
maintainability techniques,	
AFTC category II/III test	
concepts .....	16774
wing-body combinations with varia-	
tions in body wedge angle and	
height through angle-of-attack	
range .....	14565
wingless vertical take-off and	
landing, wind-tunnel investiga-	
tion .....	5570

# INDEX 1963

Entry	Entry
Aircraft—Continued	
<i>see also</i> Air carriers—Airplanes—	
Automatic light aircraft readi-	
ness monitor—Drag (air-	
craft)—Engines (aircraft)—	
Exits (aircraft)—Fighter	
planes—Flight—Glders (air-	
craft)—Helicopters—Land-	
ing (aircraft)—Lift (air-	
craft)—Lights and lighting—	
Sonic boom—Spacecraft—Sta-	
bility of aircraft—Wings	
(aircraft)— <i>also</i> names of air-	
craft parts, e.g., Engines	
(aircraft).	
Aircraft accidents:	
aerospace accident and mainte-	
nance review..... 3421	
air carriers, statistical review and	
résumé of accidents, 1951..... 16923	
altimeter-system accuracy effect on	
probability..... 9162	
Army aviation prevention pam-	
phlet..... 9658	
collision prevention devices, sym-	
posium..... 9457	
crash injury evaluation—	
crew seat design criteria..... 13099	
passenger-seat installation, test	
in H-21 helicopter..... 18351	
crash injury prevention, synthesis	
of impact acceleration technol-	
ogy..... 18353	
bibliography..... 18354	
dynamic crash test of litter in-	
stallation..... 13098	
fatal, general aviation accidents	
involving weather, study..... 16921	
general aviation operations, sta-	
tistical review..... 7774, 11649	
H-23R helicopter accident, Corpus	
Christ, Tex., crash injury	
investigation report..... 20203	
incident investigation and report-	
ing, handbook..... 15468	
investigation reports..... 178-179,	
1931-32, 4602, 7772-73, 9735-	
36, 13313-314, 15095-96, 16920,	
18709-711, 20368-370.	
investigators handbook, adden-	
dum..... 9278	
mechanisms of injury in lightplane	
crashes..... 3384	
notification procedures and service	
responsibilities..... 10102	
handbook..... 15469	
personnel restraint systems study,	
basic concepts..... 11349	
rules of CAB, investigations, etc..... 6017	
survival of extreme vertical impact	
in seated position..... 4504	
Aircraft arresting equipment, <i>see</i> Ar-	
resting gear.	
Aircraft automatic pilots:	
AN/ASW-12, weapon system flight	
evaluation..... 14903	
study of pilot's ability to control	
during simulated stability	
augmentation system failures..... 1312	
Aircraft bombs, fuzes and associated	
components..... 12959	
Aircraft engines, <i>see</i> Engines (air-	
craft).	
Aircraft fuel, <i>see</i> Motor fuel.	
Aircraft instruments, <i>see</i> Aeronau-	
tical instruments.	
Aircraft materials, <i>see</i> Materials.	
Aircraft repair stations, repair station	
certificates, Federal aviation	
regulations, amendment..... 480	
Aircraft survival equipment, KC-135	
and U-2 bailout kit, evalua-	
tion..... 14913	
Airfields, <i>see</i> Aviation fields—Pave-	
ments.	
Airfoils:	
blast loading, experimental investi-	
gation..... 7263	
helicopter rotors, hovering charac-	
teristics..... 1307	
Airframes:	
design, application of general dig-	
ital computer analysis of stati-	
cally indeterminate structures..... 1317	
maintenance, repair, and alteration,	
civil aeronautics manual,	
supp..... 476	
mechanics examination guide..... 15539	
structural components, Federal item	
identification guides for supply	
cataloging, supplements..... 3660	
Airglow:	
dark side of Venus..... 19894	
emission, Lord Rayleigh's data, re-	
examination..... 16771	
spectral, electrophotometrical and	
radar researches..... 3165	
Airlift, <i>see</i> Transportation.	
Airline routes, <i>see</i> Maps and charts.	
Airlines, <i>see</i> Air carriers.	
Airmail, <i>see</i> Air mail.	
AIRMAT, manufacturing structures	
for aerospace applications..... 16768	
Airmen:	
airman's guide—	
Pacific supplement..... 3447	
United States..... 3448	
supplement..... 3604	
classification tests—	
development, 1963..... 9623	
survey..... 9624	
first enlistment retention, mathe-	
matical simulation, analysis of	
results..... 1772	
first-term, prediction of unsuitabil-	
ity from aptitudes indexes,	
high school reference data, etc..... 18495	
international notams..... 3798	
Navy training course..... 1366	
Negro, Rapid City, S. Dak., discrim-	
ination report before Civil	
Rights Commission..... 6022	
supply warehousing-inspection car-	
eer ladder, occupational sur-	
vey..... 1773	
<i>see also</i> Air Force.	
Airmobile operations, Army field man-	
ual..... 18544	
Airplane accidents, <i>see</i> Aircraft ac-	
cidents.	
Airplane tires, <i>see</i> Tires.	
Airplanes:	
airworthiness—	
normal, utility, and acrobatic	
categories—	
civil aeronautics manual,	
supp..... 8212	
civil air regulations amend-	
ments..... 2243	
transport categories, civil aeo-	
nautics manual..... 474	
supplement..... 6389	
attack, buffet tests..... 5534	
bombers, in-flight shock-wave pres-	
sure measurements..... 20990	
C-130B, JC-130B, NC-130B (BLC),	
C-123B, and VC-124H, take-off	
and landing capabilities on off-	
runway surfaces..... 11484	
canard configuration, trapezoidal	
aspect-ratio-3 wing, effects of	
vertical location on stability	
and control..... 5556	
Caribou, retracting Fulton skyhook	
yoke..... 20207	

# JANUARY-DECEMBER

	Entry
<b>Airplanes—Continued</b>	
commercial turbojet transport, maneuver accelerations experienced during routine operations	11070
configurations with favorable lift interference, aerodynamic performance and static stability at Mach numbers up to 5	1261
delta-wing heavy-bomber configuration, with large store, store interference	18117
elastic canard-fuselage configuration, static longitudinal aerodynamic characteristics as measured in air and in Freon-12 at Mach numbers up to 0.92	16379
F-104a, air launch solid-fuel sounding rockets, use as 1st-stage booster, operational aspects	5568
flat-bottom configurations at Mach 3.0 and 3.5, aerodynamic characteristics	3111
flexible-wing manned test vehicle, wind-tunnel investigation	18152
flight instructor examination guide	2301
instrumented drones for research use in cloud physics and meteorology, evaluation	21057
jet, petroleum fuels thermal stability research, survey	1206
landing mats, experimental T 11 aluminum, engineering tests	20653
light, response to sonic booms	16405
model with tail surfaces outboard of wing tips, static stability and control characteristics	5557
multiengine, pilots flight test guide, class or type rating	17465
plane sense, general aviation information	20689
private pilot, flight training guide	13978
scaled-speed elastic swept-wing bomber and fighter models coupled wing tip to wing tip, simulated flight investigation	5532
simulators, minimum standards for approval, civil air regulations, amdt.	10106
single-engine, private pilot flight test guide	12141
spin of 1/20-scale model unswept-wing, twin-engine, observation airplane, investigation	5576
Stearman, spray distribution patterns at 50 feet	14835
<b>STOL transport—</b>	
4-propeller, handling qualities and operational problems	5599
large 4-propellered simulator study of lateral-directional handling qualities	11053
<b>supersonic—</b>	
effects of secondary-air flow on annular base force	5515
with low-aspect-ratio unswept wing and tee-tail, flight determined stability and control derivatives	14539
supersonic transports, effects of airplane and landing-gear factors on response to runway roughness	1292
swept-wing heavy bomber configurations with large store (nacelle)—	
lateral forces and pitching moments, Mach number 1.61	14533
lift and drag, Mach number, 1.61	12843
Mach number 2.01	16358
swept-wing heavy-bomber configuration with stores of different sizes, etc., supersonic store interference	16359

	Entry
<b>Airplanes—Continued</b>	
tail-wing-fuselage combinations, unswept wing and high horizontal tail, stability derivatives	5538
TB-25N, modified as airtanker for fire fighting, evaluation	10240
TFX contract investigation, hearings	10015
transport—	12019, 13809, 15386, 19056
four-engine turboprop, propeller-power-plant autoprecession boundaries for dynamic-aeroelastic model	16381
materials research, progress report	12875
sweptback wing jet model with blowing boundary-layer-control trailing- and leading-edge flaps, ground effect	11074
turboprop conversions, civil air regulations amdt.	2244
twin-engine turboprop, VG and VGH operational data, analysis	14577
twin-duct induction system, flight tests at Mach number range of 0.78 to 2.07	11001
unswept-wing model devices to improve static directional stability at Mach numbers from 0.8 to 2.2	10084
<b>VTOL—</b>	
aerodynamic characteristics of 4-duct tandem configuration	3136
aerodynamic characteristics of model with 2 high disk-loading fans mounted in wing	5602
high-disk-loading lifting fan mounted in fuselage, aerodynamic characteristics in ground effect	3149
wing-fuselage combinations—	
flat-top, solutions for flow-store interference, origin and distribution	12843, 14533, 16358, 18117
sweptback, 45°, pressure-distribution investigation at Mach no. 2.01 of model at combined angles of attack and sideslip, tabulated data	7232
swept-wing-fuselage model with finned and unfinned body pylon-mounted beneath fuselage or wing, transonic aerodynamic characteristics	18126
<b>X-15—</b>	
calibrations of pressure-type air-speed-altitude systems	7291
control system, operational experiences and characteristics	3128
general information	5616
landing-gear loads, aerodynamic and control-system contributions	19940
landing loads and dynamics	11015
North American research airplane, basic pressure measurements at transonic speeds	11005
pressure distribution	3116
research aircraft, landing-gear behavior during touchdown and runout for 17 landings	7241
skin and structural temperatures during flight	18133
spin and recovery characteristics, analytical investigation and prediction	7239
<b>X-15/B-52 combination, aerodynamic characteristics</b>	5539
<i>see also Aircraft—Fighter planes—</i>	
Sonic boom.	

# INDEX 1963

	Entry		Entry
Airport control tower operators:		Akusticheskiy zhurnal (periodical):	
air controlman 1 & C, Navy training course.....	14625	translations.....	9018
specialist, examination announcement, discontinuance notice.....	18729	Al Marj, Libya, ground water explorations in area.....	14037
Airports:		AL series, <i>see</i> NASA AL series.	
activity statistics of certificated route air carriers.....	11648	Alabama:	
approach lighting systems, maintenance, FAA handbook.....	477	annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics.....	4569
civil, radiation safety.....	14929	climatological data.....	3517
construction, alteration or deactivation, notice, FAA regulation.....	2250	coals, research and technologic work, bibliography.....	19837
design, supp., 1962.....	7651	county business patterns, activities covered by OASDI program.....	15053, 18674
directory, airman's guide supplement.....	3604	early potatoes, prepackaging at production points.....	4358
disaster control guide.....	1783	electric rate book.....	6406
Federal act, amend—		5B redevelopment area, statistical profile.....	15128
hearings.....	10006, 11892	landings, fishery products.....	3449, 15517
reports.....	11796, 17246	mineral industry, minerals yearbook chapter.....	1210, 20952
Federal aid program, Federal aviation regulations.....	2247, 17423	oil productive formations, analysis of brines.....	5493
grants-in-aid provisions, extend time—		population, 1960 characteristics.....	16882
hearings.....	10006	precipitation data, hourly.....	3771
report.....	17246	public school finance program, 1961-62.....	19111
lighting equipment, approved list.....	19160	small business, structure.....	1460
location identifiers handbook.....	14928	water resources, etc., layman's look.....	19301
location identifiers manuals, revisions.....	3878, 4883	ZIP code directory.....	20025
National Capital, FAA regulations.....	17424	Alameda Creek:	
planning, national plan, requirements 1963-67.....	11521	flood control, engineer report—	
property, release from surplus property disposal restrictions, Federal aviation regulations.....	2249	departmental edition.....	2177
public—		document edition.....	2071
acquisition of U.S. land, Federal aviation regulations.....	2248	ALARM, <i>see</i> Automatic light aircraft readiness monitor.	
affected by agreements with Federal Government, list.....	20658	Alarm systems, Federal item identification guides for supply cataloging supplements.....	3656
Federal surplus personal property acquirement.....	482	Alaska:	
surveillance radar, ASR facilities maintenance, handbook.....	19169	agricultural land development, provide report.....	13724
<i>see also</i> Air traffic—Pavements— <i>also</i> names of places where located.		Air Force remote sites, water supply and waste disposal problems.....	13207
Airspace reservations, Federal Aviation Agency closure, Project Sedan.....	11572	aircraft control and warning sites, small group performance under isolation and stress.....	1762-66
Airspace utilization, <i>see</i> Air traffic.		annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics.....	5989
Airways:		Beluga River coalfield, subbituminous deposit suitable for open-cut mining.....	19857
inspection program.....	20661	beryllium deposits, Seward Peninsula.....	19306
lighting, astronomic time switches and photoelectric devices, maintenance.....	12095	building with U.S. Army, 1867-1962.....	11545
long distance navigation techniques usable by nonmilitary ocean-crossing aircraft, study and analysis.....	11595	Cape Spencer to Arctic Ocean, coast pilot supplement.....	4637
Airworthiness, <i>see</i> Aircraft—Aircraft—Engines (aircraft)—Rotorcraft.		certification and operations rules for certified route air carriers, civil air regulations amendments.....	6392, 8214-15, 10107, 17419
Aitken, George W., ground temperature observations, Aniak, Alaska.....	12087	chum salmon, Alaska Peninsula, Kodiak Island, etc.....	8280
Ajello, Libero, laboratory manual for medical mycology.....	11241	chum salmon resources from Bristol Bay to Point Hope.....	4970
Akasofu, Syun-ichi:		climatological data.....	3517
magnetic field of—		Cook Inlet area, aeromagnetic reconnaissance of area.....	6553
model radiation field numerically computed.....	1284	county business patterns, activities covered by OASDI program.....	15055, 18678
quiet-time proton belt.....	7284	economic geology, contributions to—	19297
radiation belt.....	12873	electric rate book.....	19194
Akima, Hiroshi, error rates in FSK systems, etc.....	9212	Eskimos, Indians, and Aleuts of Anchorage area, information digest.....	14601
Akron, Ohio:			
Akron-Canton Airport, weather observations, hourly, summary, decennial census.....	21170		
occupational wage survey—			
departmental edition.....	18036		
document edition.....	17063		



# JANUARY-DECEMBER

	Entry
Alaska—Continued	
Fairweather Range, geology and petrology of 2-layered gabbro stocks	10279
fisheries, annual summary, 1961—	543, 8264
5B redevelopment area, statistical profile	15131
flight information publication—enroute	3688
planning, air traffic control procedures	3701
planning data	3696
forests, early conditions in interior	19250
hospitalization of veterans, hearing	8126
Juneau Indian village townsite, establish—	
law	11726
reports	8074, 9907
land, public sales act, equitable adjudication of sales, reports.	13575, 13702
military personnel in Alaskan Command not accompanied by dependents, unjustified cost-of-living allowances paid, GAO report	15598
mineral industry, minerals year-book chapter—	19847, 20953
mineral resources (series)	6545
northern, Naval Petroleum Reserve No. 4 and adjoining areas, seismic and gravity surveys, exploration—	5020
Ogotoruk Creek area, bioenvironmental features	4494
participate in Pacific Marine Fisheries Commission compact, hearings	4757
population, 1960, characteristics—precipitation and rainfall frequency, probable maximum data for areas to 400 square miles, etc.	11605
principal electric facilities, map—	16692, 523, 2266
public lands—	
sale act, equitable adjudication of sales, law—	15145
selection for community expansion purposes, reduce minimum size—	
law	18781
reports	15283, 17266
public school finance program, 1962-63	6339
public works act, amend to authorize settlement of claims, report	17251
Rampart power market	2104
Red Devil Quicksilver Mine, geology—	15604
rhyolite mercury prospect, Kusko-kwim River Basin, trenching and sampling	3096
rural redevelopment areas, statistical profile	15137
simulated survival trek from confluence of Anaktuvuk and Colville Rivers to Arctic Coast—	11504
snow surveys	9389
southeast—	
inventory and woods utilization standards, comparison—	12159
waterflow through salmon spawning riffle	6463
Steller sea lion herds, photographic census, 1956-58	13973
stream catalog—	
southeastern regulatory district no. 2	13976
southeastern regulatory districts nos. 3 and 4	20688

	Entry
Alaska—Continued	
transitional grants, appropriations, 1964—	
law	15158
reports	7939, 11951
transportation home of remains of Federal employees, report—	17282
transportation of private vehicles of Govt. employees in Alaska—	
hearing	15311
report	18852
transporter, Rolligon Mark 4, sub-arctic evaluation	5754
waterborne commerce, 1962	19150
waterfowl, coots, and cranes, Federal regulations governing hunting, etc., 1963-64	15535
winter flying gloves, experimental design	11505
woods, characteristics	12186
ZIP code directory	20026
Alaska Centennial Commission, create, report	15367
Alaska International Rail and Highway Commission, audit report, July 30, 1957-June 30, 1961—	10254
Alaska Railroad, encourage collective bargaining, etc., report—	11998
Alaskan Air Command, Arctic Aero-medical Laboratory, technical note	18484
Albacore, see Tuna fish.	
Albania:	
five-year plan, activities of 1963, press information report—	17853
press information reports	2513, 2942, 6713, 8510, 10578, 12322, 14151, 15723, 16238, 17829, 17853, 19532, 19598.
Sino-Soviet dispute, effect—	6962
Albano, G. A., Chicago receipts of fresh and frozen fishery products, 1961—	546
Albany, N.Y.:	
Albany County Airport, weather observations hourly, decennial census	11394
occupational wage survey—	
departmental edition	12800
document edition	11744
Albany Metallurgical Research Center, progress reports	140, 9692, 11585, 15018
Albedo:	
earth reflected solar radiation incident upon arbitrarily oriented spinning flat-plate—	14569
re-entrant cosmic-ray albedo—	21020
Alberty, Elsie J., identification and development of talent in students at secondary school level	19094
Albright, Gerald F., developing home grown industry—	5904
Albuquerque, N. Mex.:	
Municipal Airport, weather observations, hourly, decennial census	13124
occupational wage survey—	
departmental edition	14470
document edition	13451
Alcatraz Island, Federal Commission on Disposition of, see Federal Commission on Disposition of Alcatraz Island.	
ALCOA, see Aluminum Company of America.	
Alcohol:	
industries, 1962, statistics—	6579
infrared spectra between 15 and 35 microns	11474

Do not order from index; see indicated entry

Page 87

# INDEX 1963

Entry	Entry
Alcohol and Tobacco Tax Division, see Internal Revenue Service.	Algeria:
Alcoholic Beverage Control Board, D.C.:	Libya boundary, study-----
members, duties, and qualifica- tions-----	Perregraux district, economy, trans- lations-----
hearings-----	post-independence survey, transla- tions-----
report-----	Algorithmic structure of active touch, USSR-----
Alcoholic beverages, see Liquors.	Algorithms, see Arithmetic—Mathe- matics.
Alcoholism:	Alice, Tex., investigation and study of Federal Home Loan Bank Board, report-----
general information-----	Aliceville lock and dam:
USSR book, concluding chapter-----	naming-----
Alcorn County, Miss., forest inventory statistics-----	law-----
Alder:	reports-----
interplanting as nurse crop in strip-mine plantations-----	Allen enemy property, see Enemy property.
red, 20-year growth record-----	Aliens:
Aleo, John, snow, etc., removal equip- ment for Washington Interna- tional Airport-----	code of Federal regulations-----
Alert (series)-----	deportation proceedings, cancel-----
Aleutian Islands National Wildlife Refuge, birds-----	deportation suspension-----
Aleuts, Anchorage area, Alaska, in- formation digest-----	employment in scientific or tech- nical capacity, report-----
Alexander, Donald W.:	foreign scholars and visitors on of- ficial educational and cultural exchange programs, tax ad- vice-----
remarks-----	income tax guide-----
Mar. 20, 1963-----	medical examinations, manual-----
May 8, 1963-----	nonresident, income tax form 1040B, preparation, informa- tion guide-----
May 10, 1963-----	relief-----
Aug. 3, 1963-----	taxpayers, dual-status tax years, guide-----
Alexander Hamilton (U.S.S.):	Aliphatic compounds, bibliography-----
commissioning (address)-----	Alkali metals, rare, bibliography, USSR book, preface, etc-----
Alexander, Lyle T., laterite in soils-----	Alkalies, fly ash content, effective- ness in preventing expansion of concrete-----
Alexander, Robert, claim-----	Alkaline batteries, see Storage bat- teries.
Alexander, Uhlman S., supervision for quality education in science-----	Alkyl-dithiocarbamic acid amine salts as flotation collectors for sul- fide lead slime-----
Alfalfa:	All altitude capability study for radar land mass simulator system-----
potato leafhopper, control-----	All-electric homes, annual bills, Jan. 1, 1963, cities of 50,000 popula- tion or more-----
technical conference, proceedings-----	All hands, Naval Personnel Bureau information bulletin-----
Alfalfa caterpillar, control-----	All-Union:
Alfalfa saponins, see Saponins.	NOTE.—For headings be- ginning All-Union, see Union of Soviet Socialist Republics.
Alford, William J., Jr., aerodynamic characteristics of X-15/B-52 combination-----	Allagash National Riverway, proposed establishment, report of study by Outdoor Recreation Bu- reau-----
Alfred Nobel Hall of Science, dedica- tion (remarks)-----	Allegheny Airlines, Inc., accident-----
Algae:	Allegheny Dam, spillway and sluices, hydraulic model investigation-----
and microorganisms interrelation, USSR study-----	Allen, George C., broiler and turkey feed financing by cooperatives-----
Black Sea planktonic, grown in cul- tures, protein, fat, carbohy- drate, and ash content-----	Allen, Harrison, Jr., ignitability of solid propellants with chlorine trifluoride-----
blue-green anabaena variabilis and amorphonostoe punctiforme proliferating cultures, cell dry- ing mechanism, USSR study-----	Allen, Izabel L., relief-----
blue-green, role in internal reser- voirs, USSR study-----	Allen, John L.:
cultures, automatic control, USSR study-----	axisymmetric double-cone external- compression inlet in Mach num- ber range 2.07 to 1.48 perform- ance of Mach no. 3.0 design-----
Dunaliella salina, carotene poten- tial, USSR studies-----	base heat transfer, etc., Saturn model-----
evolution and nucleic acids, litera- ture data-----	pumping characteristics for several simulated variable-geometry ejectors, etc-----
metropolitan wastes, problems, sem- inar transactions-----	
radioactivity, USSR studies-----	
single-celled cultivation principle, theoretical basis, USSR study-----	
unicellular, production bases for development, USSR study-----	
water supplies of São Paulo area, Brazil-----	
Algebra:	
Boolean, problems in, USSR study- of stochastic quantities-----	
Algebraic and graphic methods for evaluating discordant lead-iso- tope ages-----	

# JANUARY-DECEMBER

Entry	Entry
Allen, Margaret F. : cold pressor test, follow-up study... serum lipid, etc., concentrations in Military Academy graduates... 13217	Alluviums—Continued quaternary, specific yield and particle-size relations, Humboldt River Valley, Nev. 14036
Allen, Rufus H., Jr., rates and dates of shortleaf pine seed fall... 20695	sediment transport in alluvial channels (ser.es) 19319
Allen, Thomas H., measurement of human body fat... 16803	studies of flow in alluvial channels (series) 10295
Allentown, Pa. : occupational wage survey— departmental edition... 10907 document edition... 9828	tentative classification of alluvial river channels... 19305
Allergy, skin tests for nasal allergy, reliability of results of testing 100 airmen... 7632	Alma area, Mich., ground-water resources... 20741
Alley, John K., synthesis of fibrous silicon carbide by thermal reduction of silicates, etc... 10953	Almanacs : air, 1963... 9253 air, 1964... 16449
Alliance for progress, see Latin America.	see also Nautical almanacs.
Alliance for Progress Committee, Commerce Dept., see Commerce Committee for Alliance for Progress.	Alosa sapidissima, see Shad.
Alliance of Unitarian Women : and Association of Universalist Women, consolidation— law... 11711 report... 11948	Alouette, Canada's 1st satellite... 3110
Alloplasty, vascular prostheses, evaluation, USSR study... 18012	Alpena, Mich. : harbor improvement, engineer report— departmental edition... 19140 document edition... 18807
Allotments (Army), see Pay, allowances, etc.	Alpha particles, thermoluminescent spectra of sodium chloride and hydroxide-free sodium chloride irradiated with 40-Mev alpha particles 9167
Allowances, see Pay, allowances, etc.	Alpha sources, fabricated plutonium, guide for preparation of license applications... 15019
Alloying effects on tungsten-fiber-reinforced copper-alloy or high-temperature-alloy matrix composites... 19907	Alpha system, simulation with positive feedback loop, USSR experiments... 19678
Alloys : frictional characteristics at elevated temperatures... 4496	Alpha waves, see Brain waves.
hard, determination of specific area of powders in production, USSR study... 706	Alpine forests of southwest China... 15719
hard, USSR research... 8996	Altay region, USSR, seismicity, USSR study... 6697
heat resistance, USSR study... 10432	Alter, H. W., fuel reprocessing plant for fast ceramic reactors... 11556
nonferrous, phase analysis, USSR study... 10554	Alternating currents, see Electricity.
rare metals, with boron and silicon for radio and electrical applications, USSR study... 6832	Altimeters : accuracy effect on collision probability... 9162
refractory— extrusion, forging, rolling and evaluation... 13196	radar, unnecessary costs in procurement by Navy Dept., GAO report... 17512
high temperature properties... 18582	Altitude : commercial transports up to 40,000 ft with autopilot in altitude hold, random deviations from stabilized cruise altitudes... 14587
S-816, high-temperature alloy scrap, reclaiming... 10963	constant altitude variable-pitch reentry maneuver initiated at velocities up to escape velocity, longitudinal range attained... 12881
sheet, fluorine environment influence on mechanical properties... 9176	high— acclimatization, pyridine nucleotide oxidases and transhydrogenase activity... 4410
structural stress corrosion at room and elevated temperature... 7601	electrocardiographic and vectorcardiographic observations in adolescence and adulthood... 71
superconductivity occurrence, rules... 18306	probability zone of increased turbulence, diurnal pattern, USSR study... 985
supersonic transports, research, progress report... 12875	operation of aircraft under IFR, Federal aviation regulations... 15473
surface phenomena, problems, USSR study... 8513	radar land mass simulator system, capability study... 12947
vaporization at high temperatures, see also names of metals, etc. 9638	simulated— high concentrations of nitrogen, gaseous tissue nitrogen of exposed rats... 16790
Allred, D. M., close-in effects of underground nuclear detonation on small mammals and invertebrates... 11576	respiratory function studies without hypoxia... 16797
Allsman, Paul T., review of mining technology... 3105, 14526	wind distributions, Santa Monica, Calif... 5588
Alluviums : desert— chemical explosive cratering experiment at Project Pre-Bugby site, Nevada... 16853	Altman, James W., design for maintainability... 11477
seismic effects from high yield nuclear cratering experiment... 11573	Alumbaugh, R. L., protective coatings for steel piling, test results... 13135
ground water in Kings River Valley, Humboldt County, Nev... 8348	

# INDEX 1963

Entry	Entry
Alumina:	Alzofon, Frederick E., variational approach to calculation of charge exchange cross sections for adiabatic collisions..... 12853
extraction from ferruginous bauxite by double-leach process..... 18098	Amalgams:
extraction, leach liquor analysis for desilication tests..... 1239	liquid zinc wetted with aluminum alloys, fracture characteristics... 20012
pressure forming of aluminum oxide..... 5500	radiochemical separations by amalgam exchange technique..... 18600
production from clay—	Amarillo, Tex.:
hydrochloric acid processes..... 3091	air terminal, weather observations, hourly, decennial census..... 16662
potassium alum process..... 19862	aircraft accident..... 178
sulfuric acid processes..... 10962	Amateur television receiver, USSR..... 12499
recovery from anorthosite—	Ambassadors:
lime soda sinter process..... 18102	American ambassador, Nation's official representative abroad..... 5905
characteristics of iron..... 1230	role and problem of coordination of U.S. policies and operations aboard, study..... 15385, 18967
reduction cell..... 16336	print as Senate document, report... 17288
whiskers, growth and analysis..... 7591	Ambrose, Mary E., accuracy of official method for determining bread-bread percentages of frozen raw breaded shrimp..... 19229
Aluminates, <i>see</i> Monocalcium aluminates.	AMC, <i>see</i> Army Materiel Command.
Aluminum:	America:
alloys—	America is for everybody..... 4831
iron magnetic and associated systems, review..... 12958	destiny in building of world community (address)..... 11299
variable-amplitude fatigue tests, effects of high and low loads..... 3147	labor, 1913-63, 50 years of progress..... 7137
variable-amplitude loadings effects on fatigue crack propagation patterns..... 16380	<i>see also</i> American republics—Central America—Latin America—Middle America—North America—South America.
wetted with liquid zinc amalgam, fracture characteristics..... 20012	America illustrated (periodical):
fabrication, Pacific Northwest, economic survey..... 1201	Polish language..... 3452
fiberglass reinforced, fabrication properties, report..... 4492	Russian language..... 3453
hard coating of ordnance material—ingot and mill products, current industrial reports..... 3574, 13287	American Airlines, Inc.:
lithium phase diagram..... 1834	accidents..... 4602, 15096, 20370
magnesium alloy plates, welded, mechanical properties..... 20013	proposed merger with Eastern Air Lines, staff report..... 2055
minerals yearbook chapter..... 19821	American Ambassador, facts for Armed Forces..... 5905
N <sup>+</sup> , N <sup>2+</sup> , and A <sup>+</sup> incident from 0.5 to 4 keV momentum accommodation..... 19932	American Association of State Highway Officials, anniversary, express appreciation of Congress, reports..... 13602, 17256
plant design, USSR studies..... 5360	American Battle Monuments Commission:
plant residues, beneficiation..... 10952	appropriations, 1964—
powder—	hearings..... 11874
method of briquetting..... 8545	report..... 11848
sintered, as high-temperature material, USSR study..... 6891	vesting care of Iwo Jima Memorial on Mount Suribachi, Volcano Islands, report..... 17145
sintered, brazing and welding, USSR study..... 8546	American buffalo..... 6453
sintered, use in producing heat-resistant material, USSR study..... 17994	American Ceramic Products, Inc., petition for adjustment assistance, Tariff Commission report..... 9462
primary, monthly report..... 4105	American Commander (S.S.):
range-energy relations for protons and electrons in Al..... 12952	launching ceremonies (remarks).... 2263
scrap and secondary ingot, mineral industry survey, monthly..... 4174	American Corsair (S.S.):
transverse magnetoresistance..... 18254	launching ceremonies (remarks).... 2263
vapor plating on steel..... 20298	American ephemeris and nautical almanac, 1965..... 18213
wire coating, evaluation for concrete mattress reinforcement... 4875	American Ethnology Bureau, bulletins -- 93, 4428, 11522, 13230, 16812
<i>see also</i> names of articles manufactured from aluminum.	American Falls quadrangle, Idaho, geology..... 10280
Aluminum alloy casting, <i>see</i> Castings.	American Federation of Government Employees, electronic data processing equipment use by Federal Government, manpower problems, hearing..... 17182
Aluminum Company of America:	American Federation of Labor and Congress of Industrial Organizations, agreement with Post Office Department..... 9324
noncompetitive procurement of military aircraft forgings, GAO review..... 15595	American Guild of Variety Artists, activities, inquiry, report..... 13747
procurement of aluminum caps and cans without adequate pricing data under AEC contracts, GAO review..... 12211, 14003	
Aluminum foil:	
converted, 1962, current industrial reports..... 11615	
electron transmission and reflection coefficients..... 9217	
Aluminum oxide, <i>see</i> Alumina.	
Alveolar pathways during 90-foot breath-hold dives..... 7200	
Alverson, Dayton L., spiny dogfish in northeastern Pacific..... 19242	

# JANUARY-DECEMBER

Entry	Entry
American Historical Association: report, 1957— departmental edition..... 16813 document edition..... 17058 report 1962— departmental edition..... 18528 document edition..... 18800	Amines: aromatic, mechanism of effect of fluorescence and photochemical oxidation of anthracene com- pounds..... 10778 chelating agents in separation of rare-earth compounds by sol- vent extraction with amines... 7226 fatty, monolayers, investigation, by contact potentials..... 11166 rare-earth-amine extraction sys- tems, yttrium behavior and effect of sequestrants..... 12838
American history, <i>see</i> History. American Indian, <i>see</i> Indians. American Instructors of Deaf, Con- vention of, <i>see</i> Convention of American Instructors of Deaf. American Legion: convention 1962, proceedings... 17067 legislative objectives, 1963, hear- ings..... 8014 American Library Association, books for leaders who work with chil- dren and youth..... 15089 American military insignia, 1800-51... 14607 American National Red Cross, land conveyance in Prince Georges County, Md., to, reports..... 11955, 18888	Amino acids: imbalances, interrelationships of cold exposure..... 11503 metabolism, effect of protein intake and cold exposure on liver enzymes associated with..... 11502 Amistad Dam: electric energy generated, trans- mission, etc., report..... 11999 market power generated, report... 11804 Amity, <i>see</i> Friendship. Amman, Gene D., insects not cause of post-emergence chronic tipburn of white pine in eastern Ten- nessee..... 12182 Ammonia: excretion during hypothermia..... 13215 liquid propellant, injector prin- ciples in 2400-pound-thrust rocket engine, evaluation..... 10987 Ammonium nitrate: fuel oil mixtures, bullet sensitivity, studies..... 10945 sensitized blasting agents, safety recommendations..... 12830
American policy, <i>see</i> International re- lations. American practical navigator, epitome of navigation..... 11136 American republics: Cuba as base for subversion, study... 6302 foreign relations of U.S., diplo- matic papers, 1941— departmental edition..... 1509 document edition..... 219 foreign relations of U.S., 1942— departmental edition..... 11296 document edition..... 9815 Inter-American series..... 1512-13, 7435, 13070-7 <i>see also</i> Latin America. American River division, <i>see</i> Central Valley project. American Samoa: Governor, report, 1962..... 19346 ground water reconnaissance..... 17530 population, 1960, characteristics... 20349 submerged lands, place within juris- diction of Government of, re- ports..... 9862, 19040 surface water supply through June 1960..... 2357 American Smelting & Refining Co., open-pit copper mining and concentrating methods and costs..... 9113 American Society for Metals, Mater- ials Central-ASM metal- lurgical educational lectures... 7592 American Society of Corporate Secre- taries, Inc., continuity of cor- porate management in event of nuclear attack, special report to corporate secretaries..... 11652 American Standards Association, Inc.: electronic data-processing equip- ment use, hearing..... 15329 13th National Conference on Stand- ards, international standards increases American exports and world trade (address)..... 4645 American women, report of Presi- dent's Commission on Status of Women..... 20075 Americans, <i>see</i> Latin America. Ames, L. M., monograph of Chaet- omataceae..... 7683 Ames Laboratory, contribution to nu- clear research (remarks)..... 9693 AMG, <i>see</i> Acreage-marketing guide. Amherst County, Va.: sapprolite ores..... 1234 titanium resources..... 1234 Amidon, Elliot, possible impact of recreation development on tim- ber production in 3 California national forests..... 6501	Ammunition: Federal item identification guides for supply cataloging, suppl- ments..... 3660 interstate traffic, internal revenue regulations..... 2379 supply facilities, Yards and Docks Bureau design manual, change... 1601 Amniotic membranes in treatment of thermal skin burns in chil- dren, USSR..... 15739 Amphibians, Yunnan Province, Chi- na, material..... 16234 Amphibious operations: NROTC cruise manual, 1963..... 11147 U.S. amphibious forces, manual on poisonous snakes of world..... 16454 Amplifiers: electronic, KIN TEL 204A, Navy calibration program, technical manual..... 9290 fluid amplifications, basic prin- ciples..... 11197 fluid amplifier handbooks..... 9312-13 Mark 121 Mods 1, 2, and 3 over- haul..... 11194 parametric, test and evaluation... 13201 seismic, input, consideration in transient effects in electrody- namic seismograph, USSR study..... 6686 Amputees, above-knee, step into ac- tion, guidebook..... 9356 AMRL, <i>see</i> Aerospace Medical Re- search Laboratories. AMS, <i>see</i> Agriculture Marketing Service—Army Map Service. Amu-Dar'ya River will flow into Cas- plan Sea, USSR..... 10791 Amundson, Peggy S: legal status of women in U.S., re- ports— Connecticut..... 7518 District of Columbia..... 3403 Massachusetts..... 3404 New Mexico..... 9512 West Virginia..... 3405



# INDEX 1963

Entry	Entry
Amusements:	
business expenditures, deductibility, testimony of Commissioner of Internal Revenue.....	8104
entertainment, businessmen, income tax deduction, questions and answers.....	15643
expenses, 1962 rules for deducting, and new 1963 recordkeeping rules for substantiation.....	6584
AMVETS, legislative objectives, 1963, hearings.....	8014
Anabiosis and general problem of life, USSR.....	14396
Anaktuvuk River, and Colville River confluence, simulated survival trek to Arctic Coast.....	11504
Analog computers, <i>see</i> Electronic computers.	
Analog study—	
descents from lunar orbit.....	3143
influence of internal modifications to wing leading edge on its transient temperature rise during high-speed flight.....	16354
Analysis, <i>see</i> Chemical analysis—Instrumental analysis—Radiochemical analysis—also names of substances analyzed.	
Analysts, <i>see</i> Research analysts.	
Analytic aerotriangulation, <i>see</i> Aerial mapping.	
Analytical investigation of ablation.....	5564
Analytical theory of stretch yo-yo for de-spin of satellites.....	9169
Analysts:	
Bendix DA-1 digital differential, methods of generating functions.....	3233
mass spectrometer, 6-inch radius for isotopic analysis of solids, liquids, or gases.....	9682
<i>see also</i> Gas analyzers.	
Anatomy:	
hypothalamus and its connections, insect, contribution toward encyclopedia.....	11489
Anaya, Toney, directory of labor organizations, Asia and Australasia.....	16561
Anaya, Toney, directory of labor organizations, Asia and Australasia.....	19364
Anchor Dam, technical record of design and construction.....	7419
Anchorage, Alaska:	
electric facilities of area, map.....	523
Eskimos, Indians, and Aleuts of area, information digest.....	14661
International Airport, weather observations, hourly, decennial census.....	7509
Anders, R. B., ground-water geology of Karnes County, Tex.....	8340
Anderson, Arnold M., relief.....	7901
Anderson, Charnel, technology in American education, 1650-1900.....	6348
Anderson, Dale L., principles of layout for retail produce operations.....	9578
Anderson, Donald L., sputtering effects with hydrogen ions on total hemispherical emittance of metallic surfaces.....	5598
Anderson, Donald R., postirradiation hyperglycemia in primate.....	16800
Anderson, George, microminiaturization techniques for equipment.....	1768
Anderson, Gerald W., sweetfern rust on hard pines.....	15551
Anderson, Hazel C., properties of compounds in coal-carbonization products.....	9109
Anderson, Henry W.:	
model for evaluating wildland management for flood prevention.....	6502
program for watershed management research in Hawaii wildlands.....	12164
use of radioactive sources in measuring characteristics of snow-packs.....	19259
Anderson, L. O., water repellants improve performance of drop siding.....	19265
Anderson, Maxine, annual digest of State and Federal labor legislation, 1961-62.....	16268
Anderson, Melvin S., buckling of ring-stiffened cylinders under pure bending moment and nonuniform temperature distribution.....	1305
Anderson, Neil A., Eastern gall rust.....	15552
Anderson, Raymond L., irrigation enterprises in northeastern Colorado.....	15416
Anderson, R. V.:	
atmospheric electricity measurements.....	11175
NRL semiautomatic atmospheric electricity station.....	3229
Anderson, T. W., use of factor analysis in statistical analysis of multiple time series.....	4419
Anderson, Wallace L., more wildlife through soil and water conservation.....	9564
Anderson, Webster S., pneumatic vibrating-blade planer operation in phosphate, etc.....	3095
Anderson, William L., tellurium determination.....	7225
Andolsek, L. J., nomination, hearing.....	10023
Andrew Johnson National Historic Site, change name from Andrew Johnson National Monument, report.....	20374
Andrew Johnson National Monument, change name to Andrew Johnson National Historic Site, report.....	20374
Andrews, Edith W., labor in Indonesia.....	29027
Andrews, Philip W., acute carbon tetrachloride hepatotoxicity.....	7628
Andrews, William H., flight determined stability and control derivatives of supersonic airplane, etc.....	14539
Andros Island, environment of calcium carbonate deposition.....	604
Androscoggin River, pollution of interstate waters conference, proceedings.....	3276
Anemometers:	
sonic—	
measuring vertical component of wind velocity.....	9616
study of turbulent wind loading on missiles.....	1740
wind measurement, Weather Bureau, history.....	16668
Anesthesia, <i>see</i> Anesthetics.	
Anesthesiology, experimental surgery and anesthesiology (USSR periodical).....	658, 2527
Anesthetics:	
anesthesia for operations and painful changes of dressings, USSR study.....	18011
local, effect of procedures on stress in dental patients.....	13218
lung surgery, USSR studies.....	17979
Angle of attack indicators, quickening terms for improved binary angle of attack display, method for establishment.....	11154
Angola, preparing shipments to.....	8419

# JANUARY-DECEMBER

	Entry		Entry
Angostura Reservoir quadrangle, S. Dak., geology-----	6544	Anionic flotation of silica from geothitic iron-bearing materials, Cuyuna Range, Minn.-----	9128
Aniak, Alaska, ground temperature observations-----	12087	Anlauf quadrangle, Oreg., geology-----	5015
Animal Disease Eradication Division: regulations and laws administered by code of Federal regulations, veterinarians, duties and responsibilities-----	18408	ANNA, <i>see</i> Satellites	
Animal glue, <i>see</i> Glue.	14841	Annapolis, Md., <i>see</i> Naval Academy, Annapolis.	
Animal husbandry, <i>see</i> Animals.		Annelids, Cambarincola genus, revision-----	7323
Animal industry, <i>see</i> Livestock.		<i>see also</i> Polychaeta.	
Animal Inspection and Quarantine Division, veterinarians, duties and responsibilities-----	14841	Annosus root rot in eastern pines-----	10210
Animal products:		Annuals (plants):	
carload waybill statistics, 1961-----	6626, 8426	flowering, growing, cultivating, etc-----	16741
code of Federal regulations-----	4907	Annulites:	
Animal traps, bamboo, mongoose-----	19245	payable under Foreign Service retirement and disability system, adjustments, hearing-----	2091
Animals:		Supreme Court Justices widows, increase, report-----	20598
antennally irradiated with ionizing radiation, characteristics of higher nervous functions, USSR study-----	17673	variable, in retirement income-----	3331
behavior, USSR studies-----	19451	<i>see also</i> Civil service pensions—Pensions.	
carload waybill statistics, 1961-----	6626, 8426	Anorthosite:	
cerebral cortex, experiments-----	19471	alumina recovery-----	
code of Federal regulations-----	4907	by lime soda sinter process-----	18102
ecology of wild life, role of trouble factor-----	16132	characteristics of iron-----	1230
experimental, identification marking-----	10229	Anoxia, and anoxic-ischemic encephalopathy in rats, cytochemistry-----	7195
exposed to radiation-----	10131, 10133	ANPP (Army nuclear power program), <i>see</i> Nuclear reactor power plants.	
protection-----	10132	Ansonia, Conn., four-town redevelopment area, ARA case book-----	20317
husbandry-----		Anta, Peru, uranium reconnaissance-----	11581
Communist China,		Antarctic regions:	
translations-----	650, 665, 915, 926, 1031, 1101, 2578, 2608, 2640, 2790, 2835, 5376, 6688, 6737, 6871, 6938, 8457, 8530, 8596, 8618, 8668, 8843, 8982, 10448, 10498, 10527, 10689, 10739, 12387, 12396, 12679, 14183, 14242, 14247, 14360, 15755, 15988, 15900, 16021, 16117, 16158, 17757, 17787, 17905, 19384, 19492, 19558, 19663, 19699, 19758, 20795, 20890.	Beacon sandstone of Antarctica, type section-----	19318
Mongolian production, status research-----	10680	cartographic materials, acquisitions list-----	3337
interstate transportation, code of Federal regulations-----	18408	climatological data for Antarctic stations-----	11380, 14775, 16656
laboratory animal facilities and care, guide-----	9340	contributions to geology of Antarctica (series)-----	19318
live, Federal item identification guides for supply cataloging, supplements-----	3659	magnetic results-----	
neutron irradiated, action of elevated temperatures, USSR study-----	16013	Antarctic peninsular traverse, 1961-62-----	16958
physiology, USSR study-----	19435	Ellsworth Highland and McMurdo-to-Pole traverses, Antarctica, 1960-61-----	1951
physiology of blood in hot climates, USSR study-----	19707	Mount Gran coal deposits, Victoria Land, Antarctica-----	12834
populations, dynamics, USSR study-----	16242	multilateral treaty, measures in furtherance of principles and objectives, recommendations-----	11307
prolonged exposure to pressurized normal and synthetic atmospheres-----	9101	seismological bulletin-----	3456
psychopharmacology, research in central nervous system effects, handbook-----	21093	South Pole micrometeorology program, data presentation-----	1435
tumors, types found by Federal meat inspectors in 8-year survey-----	9554	stress and teeth-----	7192
used in research, provide humane treatment, hearings-----	294	stress and vitamin requirements-----	7194
wild, free importation-----	15383	theory of densification of dry snow on high polar glaciers-----	6362
hearing-----	4742	United States Antarctic Research Program, general information-----	14617
<i>see also</i> Diseases of animals—Livestock.		Antarctic Treaty:	
		ratification, report-----	20544
		text-----	20516
		Antarctica, <i>see</i> Antarctic regions.	
		Antelope Valley, Paleozoic rocks of area-----	10291
		Antelopes, pronghorn, conservation note-----	4949
		Antennas:	
		and radio propagation, technical manual-----	11543
		beam elevation angle for control of tropospheric interference between space system earth terminals and terrestrial stations-----	18192
		dipole, ground proximity loss curves-----	11101
		electrically short, impedance in ionosphere-----	5581

# INDEX 1963

Entry	Entry
Antennas—Continued	Antigens and antibodies—Continued
excitation of electroacoustic waves	fluorescent antibodies, USSR
in ionosphere-----	studies—
12871	criteria of specific brightness of
frequency steering of beam in an-	bacteria stained with-----
tenna arrays, USSR study-----	17689
5123	influenza and rickettsial diseases,
high-frequency spiral, at Naval	research-----
Radio Station, Cheltenham,	15845
Md-----	microbiological research-----
11184	16252
radar, 150-ft. steerable, VHF-UHF	microbiology (survey)-----
missile and space-research-----	14095
12950	processing bacteriological prep-
radiating within ionosphere, ion	arations-----
sheath effects-----	12494
11049	fluorescent conjugates, purification
Rawlin set AN/GMD-2, modifica-	from free fluorochrome using
tion evaluation technique-----	ion exchange resins, USSR
5877	study-----
space, self-erecting flexible foam	15798
structures-----	formation of antibodies during
7267	ionizing radiation, significance
structures, construction, lighting	of plasma cells, USSR study-----
and marking, FCC rules and	7073
regulations-----	method for accelerated diagnosis of
487, 2257	typhoid fever and paraty-
vertical, influence of sector ground	phoids, USSR study-----
screen on fields-----	12492
11097	penicillin, antibodies to, USSR
Anthracene, compounds, mechanism	study-----
of effect of aromatic amines on	19536
fluorescence and photochemical	therapeutic and cytotoxic effect of
oxidation-----	antibodies and their role in
10778	pathogenesis of radiation sick-
Anthracite, <i>see</i> Coal.	ness, USSR study-----
10778	15674
Anthrax:	Anti-influenza vaccine, <i>see</i> Influenza
USSR, organization and method of	vaccine.
fighting-----	Antilles:
2997	contributions to hydrology of Latin
USSR study-----	America and Antilles (series)-----
19487	614,
Anthropologists, social scientists,	15619
chart-----	light lists-----
1186	4641
Anthropology, physical, Behavioral	waterborne commerce, 1962-----
Sciences Laboratory reports,	19148
bibliography-----	18485
Antibiotics:	Antimissiles, <i>see</i> Missiles.
experimental use in radiation sick-	Antimony:
ness-----	minerals yearbook chapter-----
19491	19822
olivomycin and krutsin, morpho-	primary, mineral industry survey,
logical action on cells of ascitic	quarterly-----
form of Ehrlich's tumor, USSR	3457
study-----	Antioxidants:
6704	action of metals and organometal
orally administered, influence on	compounds in fluoroesters and
growth and plasma lipid levels	polyphenyl ethers-----
of growing chicks-----	7370
11548	effectiveness of motor-oil additives-----
production problems, etc., USSR	18513
studies-----	Antiseptics, high polymer iodine com-
701	pounds, USSR study-----
tetracycline group, translations	785
from Antibiotiki gruppy tetratsiklinov	Antitrust laws, <i>see</i> Monopolies—
10671	Trusts (Industrial).
<i>see also</i> Cruzin.	Antofagasta Province, Chile, uranium
Antibiotiki gruppy tetratsiklinov,	reconnaissance-----
translations-----	16855
10671	Ants:
Antibodies, <i>see</i> Antigens and anti-	control in home and garden-----
bodies.	5820
Anticholesteremics, and their oppo-	fire, illustrated key to species-----
sites, NHI supported research	7550
grants-----	Anvil and plow, history of Depart-
19961	ment of Labor-----
Anticholinesterase properties of some	7134
O-ethyl-S-alkylmethylthiophos-	Aoki, Shinko, theory of critical in-
phonates-----	clination of close earth satel-
20917	lites-----
Anticoagulants:	19914
and their opposites, NHI supported	Aoyagi, Koyoshi, ground effect of jet
research grants-----	transport-----
19961	11074
therapy, laboratory techniques used,	Apanasewicz, Nellie:
manual-----	education in Czechoslovakia-----
16511	10067
Anticorrosives, <i>see</i> Corrosives and	educational systems in Poland-----
anticorrosives.	6331
Anticyclones, subtropical, contribu-	Apartment houses:
tion to formation, Czechoslovak	Impact noise control in multifamily
study-----	dwelling, guide-----
7066	8235
Antidiscrimination, <i>see</i> Discrimina-	shelter incorporation-----
tion in employment—Housing.	1934
Antidumping duties, <i>see</i> Tariff.	Aphids, <i>see</i> Plant lice.
Antietam National Battlefield Site,	Aphonia, <i>see</i> Voice.
general information-----	Aphrodidae, catalogue-----
1343	7549
Anti-fatigue drugs, physiological and	Aplite, minerals yearbook chapter-----
biochemical evaluation-----	18070
7685-87	Appalachian region:
Antifriction bearings, <i>see</i> Bearings	exurban development in selected
(machinery).	areas-----
Antigens and antibodies:	12049
detection of antibodies against	southern—
Rickettsia prowazekii by lumi-	campgrounds and picnic sites,
nescent-serological method,	recreation impact-----
USSR study-----	6525
14140	white pine plantations, volume
	and yield-----
	6524
	white pine provenance study-----
	12192
	Apparatus for forming waterdrop-----
	1719
	Apparel, <i>see</i> Clothing.
	Appeal procedures, <i>see</i> Government
	officials and employees.

# JANUARY-DECEMBER

	Entry
Apple juice, superconcentrated, market potential-----	5828
Apples:	
apple clones in U.S., survey-----	11433
automatic pallet-box filler for apples-----	34
blight-----	14861
canning and freezing, farm prices, 1951-61-----	12041
commercial, production by varieties, 1962 with comparisons-----	1562
dehydrofrozen slices, potential in selected markets-----	4361
McIntosh, packing and merchandising, some effects on quality in New York City-----	4334
production, use, value, 1961-62-----	18340
storage and packing facilities for southern Illinois-----	13176
Washington Delicious, sold in Chicago and New York City, prices and marketing margins-----	5831
Applied multiple linear regression-----	13213
Appointments, <i>see</i> Civil service.	
Apportionments, State legislatures-----	4326
Appraisal, <i>see</i> Valuation.	
Apprentices:	
adequate supply of craftsmen (remarks)-----	5902
Apprenticeship and Training Bureau publications-----	18529
apprenticeship and training representative, examination announcement-----	20387
apprenticeship, general information-----	9644
apprenticeship, what it is all about (address)-----	94
careers in apprenticeship-----	14930
construction industry, etc., satisfying manpower need (remarks)-----	4429
draftsmen, apprenticeship and training standards-----	7652
dropouts in construction industry-----	13231
Federal Government's participation in apprenticeship programs (remarks)-----	7653
GPO training series-----	12237-238, 17536
joint apprenticeship and training committees, JATC handbook-----	1785
learners, employment, pursuant to Fair labor standards act-----	16651
new standards and challenges (remarks)-----	14931
Apprenticeship and Training Bureau: JATC handbook, guide for joint committees-----	1785
publications-----	18529
responsibilities (remarks)-----	14931
role and functions (address)-----	94
technical bulletin T series-----	5901
Approach lights, <i>see</i> Lights and lighting.	
Approach, Naval aviation safety review-----	3460
Approach to production response-----	2130
Appropriations:	
authority of Senate to originate appropriation bills-----	9959
general Government matters, 1964, continue-----	
laws-----	13429, 17039, 20443
reports-----	13572, 13743
legislative, 1964-----	
hearings-----	11879, 13791
reports-----	11830, 13750
statements, 87th Congress, 2d session-----	2081
supplemental, 1963-----	
hearings-----	7983, 9996
law-----	11717
proposals-----	4726

	Entry
Appropriations—Continued	
supplemental, 1963—continued	
reports-----	7959, 9888, 9903, 9972
waive points of order, report-----	20464
<i>see also</i> Government offices— <i>also</i> subjects, or names of departments, etc., for which appropriations are made.	
Appropriations Committee, House:	
hearings-----	6182-84, 7979-81, 7983-85, 9921-24, 11873-879, 13637, 15298-299, 17161-162, 18918-920, 20494.
reports-----	6116, 7939, 7941, 7959, 9874, 11816, 11830, 11848, 13563, 13572, 13600, 17294, 18887.
Appropriations Committee, Senate:	
committee print-----	6296
hearings-----	6289, 9995-97, 13791, 15373, 17301-303, 20606
reports-----	6230, 9972, 9983, 11951, 13743, 13750, 15356, 19009
Approximations, successive approximation methods for solving optimality problems, USSR study-----	6678
Apricots:	
frozen, U.S. standards for grades-----	13154
production, use, value, by States, 1961-62-----	16615
APRO, <i>see</i> Army Personnel Research Office.	
Aptaker, Edward, remarks, Aug. 14, 1963-----	16312
Aptitude tests:	
Air Force—	
airmen classification tests—	
development, 1963-----	9623
survey-----	9624
airmen, qualification examination 1962, development, errata-----	7622
airmen, technical school success from homogeneous biographical inventory scores, prediction-----	67
comparison of instructor test scores and general indexes achieved by sample of basic airmen-----	4405
enlisted accessions, aptitude data-----	65
hierarchical factors in course grades in aviation high school-----	4407
indexes, comparison with talent test composites-----	18496
NCO leaders, selection techniques, status, June 30, 1962-----	4466
new techniques, status, June 30, 1962-----	4465
Armed Forces qualification test 7 and 8, screening devices for selective service registrants who fall-----	16831
armed services enlisted input, methods for improving, status report, 1962-----	4464
correction of correlation with dichotomous variable for restriction in range-----	7623
enlisted submarine school graduates, follow-up study on attitude, performance, and achievement levels-----	9103
Aquariums:	
home, aquatic plants, use, list-----	15522
turtles, care in home aquarium-----	19232
Aquatic animals:	
Black Sea fauna, influence of rapana bezoar Liné, USSR study-----	20919
radionuclides in estuarine, etc., environments, symposium-----	12990
<i>see also</i> Fresh-water fauna—Marine fauna.	

# INDEX 1963

	Entry		Entry
Aquatic herbicide data-----	1680	Architects:	
Aquatic insects, uptake of radioisotopes, USSR study-----	12513	architect-engineer contracts, how to obtain consideration with Defense Dept-----	6313
Aquatic life:		architect engineers on AEC projects, list-----	13252
acclimatization, significance of abiotic and biotic factors of environment, USSR study-----	14154	examination announcements-----	4631
radioactive contamination of aquatic media and organisms-----	1822	discontinuance notice-----	4621
<i>see also</i> Fish and fisheries.		housing for aged, reading list-----	15627
Aquatic plants:		qualified in fallout shelter analysis, directory-----	7777, 18713
higher water plants as related to polluted continental bodies of water, USSR study-----	12341	Architecture:	
southeastern U.S., guide and key--	6451	Air Force structures, definitive designs, change-----	4384
use in home aquarium, list-----	15522	definitive designs for naval shore facilities-----	9518
Aqueous slurries of coal and granular materials, bibliography--	14497	design of hardened structures to resist nuclear explosions-----	11487
Aquifers:		design qualities, European and American multi-family housing projects-----	13911
electric analog of 3-dimensional flow-----	2353	Fremont Canyon powerplant and power conduit, technical record of design and construction--	11256
Maynard, Mass., area, test in deposits of glacial outwash-----	2354	highway bridge plans--	
nonhomogeneous, steady flow, calculation of resistance and error in electric analog-----	5032	concrete superstructures-----	5701
ARA, <i>see</i> Area Redevelopment Administration.		continuous bridges-----	5704
Arabs:		structural steel superstructures--	5702
immigration, settlement and minority in Israel-----	5354	timber bridges-----	5703
refugees from Palestine, report-----	7957	housing renovation and brick designs, Chinese study-----	14234
Aral Sea, geomorphological characteristics, USSR study-----	702	journal of architecture (Chinese periodical), translations-----	8527
Aranas, National Wildlife Refuge, mammals-----	4964	Navy design manual-----	1597
Arasan, <i>see</i> Thiram.		nursing home plan review-----	13017
Arauco Province, Chile, natives recover their lands-----	758	structural design, emergency construction, engineering manual--	19144
Arbic, Richard G., tailless missile configuration-----	10979	Arctic Aeromedical Laboratory, technical documentary reports-----	1751-66, 17488-503, 13203-206, 14907-912, 18467-483
Arbitration, <i>see</i> Industrial arbitration.		technical notes-----	11504-506, 13207, 14913, 18484
Arboretums, <i>see</i> Botanical gardens.		Arctic char, <i>see</i> Trout.	
Are (electric), <i>see</i> Electric arc.		Arctic Ocean:	
Are melting, <i>see</i> Melting.		lights and fog signals, list-----	1364, 21053
Are tunnels, <i>see</i> Wind tunnels.		Navy marine climatic atlas-----	12961
Archaeology:		Arctic regions:	
archeological research series-----	1344	Air Force remote sites, waste disposal system for small groups--	18472
excavations at Fort Raleigh National Historic Site-----	1344	aircraft maintenance crews, weather factor effects-----	18482
inter-agency salvage programs, papers--		bibliography-----	19073
departmental edition-----	13230	biology and medicine symposia--	18489
figures-----	11522	climatological data for Arctic stations-----	9490
document edition-----	13443	comparative physiology of temperature regulation, papers--	13209
Latin America, aboriginal cultural development-----	14695	effects on man of partial cold water immersion-----	18483
programs and areas, National Park Service, general information--	12917	geological studies, USSR-----	19650
publications, price list-----	18279	IGY scientist's work in Antarctica, USSR study-----	20823
Arches and burners for oil-fired maple sap evaporators-----	4341	meteorology photo probe, polarized light experiment-----	16364
Arches National Monument, general information-----	9237	muskeg, review of research-----	1438
Archipelagoes, South Sea, general information, Communist China study-----	8783	northern operations, field manual--	5910
Archipel, Victor, <i>see</i> Jaanimets, Viktor.		polar aurorae, USSR study-----	10523
Architect of Capitol:		reindeer thermal and metabolic measurements during rest and exercise-----	1751
appropriations, 1964, legislative--		Soviet conquest-----	864
hearings-----	13791	survival rations-----	1761, 11499
reports-----	11830, 13750	USSR northern regions, acclimatization of man-----	20773
budget, 1964, amendments-----	9838	<i>see also</i> Greenland--Subarctic regions.	
employees assigned to House of Representatives, authorize payment of death gratuities to beneficiaries, report-----	13535	Ardenne American Cemetery and Memorial, general information-----	16811
employees retirement benefits, correct inequity--		Area designation status reports-----	7655, 11523, 16816
hearings-----	11913, 17329	Area handbook-----	114
report-----	11837	Area redevelopment, <i>see</i> Redevelopment (city planning, etc.).	



# JANUARY-DECEMBER

	Entry
Area redevelopment act, <i>see</i> Unemployed.	
Area Redevelopment Administration:	
activities (remarks)-----	1788
annual report, 1962-----	5903
ARA case book series-----	20317
developing homegrown industry-----	5904
how ARA technical assistance programs work-----	11524
loan for soybean processing plant, hearing-----	11872
press releases-----	4037
publications, list-----	4431
river basin planning, relationship to ARA program (remarks)-----	11527
role in area redevelopment-----	9381
Area redevelopment bookshelf of community aids-----	14932-933
Area redevelopment bulletin-----	3462
Area redevelopment manpower reports-----	17398-402
Area resource development-----	10123
Areawide planning of facilities for long-term treatment and care-----	7395
Areawide planning of facilities for rehabilitation services, report-----	12982
Arend, John L., cordwood heights of mixed oak growing on Grayling and Rubicon soils-----	12177
Arenstorf, Richard F., restricted 3-body problem representing analytic continuations, of Keplerian elliptic motions-----	11072
Aresco, S. J., analyses of tippie and delivered samples of coal collected during fiscal year 1962-----	18104
Arey, Will, remarks, Feb. 19, 1963-----	5763
Argentina:	
agricultural commodities, agreement-----	5740
declaration on provisional accession to GATT-----	1552
economic developments, 1962-----	8411
economy, basic data-----	10333
education exchange programs, financing, agreement-----	21127
extending declaration on provisional accession to GATT-----	9421
fishing industry, 1961-----	2293
import tariff system-----	8386
livestock and meat industry-----	15543
trade agreement-----	18336
Argonne National Laboratory, ground-water conditions, 1948-60-----	19327
Ariel, <i>see</i> Satellites.	
Arithmetic, algorithm for recognition of machine-written symbols, USSR study-----	875
Arizona:	
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics-----	4571
Arizona v. California, Colorado River basin water rights controversy, Supreme Court opinion-----	11920
census of population, 1960, characteristics-----	11606
central, water-table fluctuations, reduced by removal of tamarisk-----	4988
climatological data-----	3517
county business patterns, activities covered by OASDI program-----	15054, 18677
5B redevelopment area, statistical profile-----	13364
forest-----	
effect of logging on vegetation and deer use-----	4987
use of natural openings by deer, elk, and cattle-----	4986
Gila River drainage basin, head-water springs-----	
quality of water-----	8347
reconnaissance-----	8347

	Entry
Arizona—Continued	
highway construction practices, hearings-----	13668
hydrology, analysis and evaluation of data for San Simon Basin-----	10299
mineral industries, water requirements and uses-----	12824
mineral industry, minerals year-book chapter-----	1211
Pinal Creek flood control, engineer report-----	
departmental edition-----	446
document edition-----	249
Pinal Ranch quadrangle, geology-----	15603
ponderosa pines-----	
estimating past diameters-----	17493
pole-size, taper table-----	17494
precipitation data, hourly-----	3771
public school finance program, 1962-63-----	15441
water supply outlook and snow surveys-----	4284
ZIP code directory-----	20027
Arizona Milling Co., relief-----	18990
Arkansas:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties statistics-----	4570
climatological data-----	3517
county business patterns, activities covered by OASDI program-----	13285, 18675
electric rate book-----	13916
5B redevelopment area, statistical profile-----	13363
floods of Apr.-June 1957-----	8352
land transfer to Fayetteville, Ark-----	
law-----	20431
reports-----	6236, 18869
population, 1960, characteristics-----	13274
precipitation data, hourly-----	3771
public school finance program, 1962-63-----	13857
release restrictions on real property conveyed by United States to Arkansas-----	
hearings-----	18921, 18924
law-----	18786
reports-----	6235, 18841
sawmills, management staffing needs-----	1457
south, oil-productive formations, analyses of brines-----	18099
weather stations, decadal census-----	16669
women, labor laws, summary-----	9511
ZIP code directory-----	20028
Arkansas River and Valley:	
conservation program of Basin Association (remarks)-----	14054
flood control, engineer report-----	
departmental edition-----	397, 2205
document edition-----	240, 2076
navigation, etc., conditions at typical lock and dam, hydraulic model investigation-----	15457
water supply outlook and snow surveys of drainage basins-----	4285
ARL, <i>see</i> Aeronautical Research Laboratory.	
Armed Forces:	
appropriations, 1964, military procurement-----	
hearings-----	6187
law-----	11720
reports-----	6142, 6161, 8073, 9902
Armed Forces song folio-----	3164
claims settlement by Federal agencies, report-----	13581
Cochabamba Valley fuel necessities intervention in Bolivia-----	2604
courts martial manual, 1951, addendum-----	4791
decorations and awards (poster)-----	18538

# INDEX 1963

	Entry		Entry
Armed Forces—Continued		Armed Forces Industrial College, <i>see</i>	
dependents, baggage, etc., advance		Industrial College of Armed	
return, report.....	13540	Forces.	
dependents, protection against eviction, hearing.....	8126	Armed Forces Information and Education Office:	
digest of opinions of Judge Advocates General.....	3600	DOD pamphlets.....	95-96, 7660, 20318
enlisted input, methods for improving, status report, 1962.....	4464	for commanders, this changing world.....	97
facts—		poster, DOD-P series.....	18538
heritage of freedom, origins, etc.	7659	Armed Forces Institute:	
Philippines, lessons learned 1946-53 (lecture).....	18534	catalog.....	20318
role of American ambassador.....	5905	manuals.....	2111, 4792-93, 6309-10, 10032, 12035, 13531-832, 17342.
Soviet treaty violations, record of broken promises.....	7657	study guide—	
third challenge, unconventional warfare.....	7658	biology.....	2111, 6309
housing, Navy, Yards and Docks Bureau design manual change.....	1605	general science.....	6310, 13832
inventions wanted, list.....	1339, 9230	supply announcements.....	10046
members, retirement in highest grade—		supply notes.....	2120
hearings.....	18920, 18924	Armed Services, <i>see</i> Armed Forces.	
report.....	18842	Armed Services Committee, House:	
nonappropriated fund employees, place under longshoremen's compensation act as extended.....	393	calendar.....	3830
nontactical construction equipment held on Okinawa by military services, GAO review.....	12208	committee prints.....	18927-929
personnel—		employ additional employee, report.....	13534
dependents rental limitations, increase, report.....	11961	hearings.....	4752, 6185-91, 7986, 11880-886, 13638-642, 15300-302, 17163, 18920-926, 20495.
medical care program, annual report.....	18560	investigations and studies—	
your State and local taxes, troop topics.....	11539	expenses, report.....	6118
procurement regulations.....	6311	matters relating to procurement, etc., by Defense Dept., authorization, report.....	6111
revision.....	3465	organization, hearing.....	4752
reemployment rights of Federal employees who perform duty.....	9757	reports.....	4733, 6139, 6142, 6166, 7968, 11809, 13496, 13536-542, 13601, 13603, 13606, 13608, 13610-611, 15208, 17133, 18840-844, 20491.
reenlistment of undesirable military personnel, GAO review.....	5006	Armed Services Committee, Senate:	
retired, dual compensation-dual employment laws, modernize, hearings.....	17181	calendar.....	3849
settlement of claims against members insured by Brandaris Insurance Co., agreement with Germany.....	13079	committee print.....	13792
social security for servicemen.....	7375	hearings.....	326, 4772, 8091-92, 9998-99, 12006, 15374-376, 19043.
status in Australia, agreement and protocol.....	14729	investigations and studies—	
status of forces, NATO treaty, agreements with Federal Republic of Germany.....	16577-578	national defense, authorization, report.....	6239
unified action, principles, doctrines, etc., governing.....	12270, 17571	preparedness program, Cuban military buildup, report.....	13792
USSR—		strategic and critical stockpiling, authorization, report.....	6240
border troops.....	19407	reports.....	6272, 6274, 8073, 11976, 13752, 13755, 13775, 15343, 15360-361, 19032, 13775, 15343, 15360-361, 19032.
development as part of socialist state.....	19485	Armed services papers.....	4752, 6185-90, 7986, 11880-885, 13638-642, 15300-301, 17163, 18920A-926, 20495.
PVO troops, translations.....	12615	Armed Services Technical Information Agency:	
rocket, PVO, and ground troops, translation.....	1017	ASTIA report bibliographies—	
rocket troops, translations.....	6927	display systems.....	4437
VA-Armed Forces cooperative study of chemotherapy of tuberculosis.....	9475	explosive forming.....	4438
<i>see also</i> Pay allowances, etc.—		plasma physics and magnetohydrodynamics.....	4439
Reserve components of Armed Forces—		teaching machines.....	4440
Retirement.		chemical thesaurus.....	1792
Armed Forces Day:		correlation index of technical reports.....	4507
power for peace, manual.....	6308	descriptors thesaurus.....	1793
power for peace, 1963, speakers' guide for service spokesmen.....	8143	Armed Services Whole Blood Processing Laboratories, manual.....	2112
Armed Forces Food and Container Institute:		Armenian Soviet Socialist Republic, Academy of Chemical Sciences, new drugs developed.....	19450
publications issued under earlier name, list.....	9370	Armfield, Blanche B., Medical Department organization and administration in World War II.....	11550
technical reports etc., covering aerial delivery research activities, bibliography.....	9368	Armijo, J. S., hydrogen overvoltage and electrochemical potentials of zirconium and zirconium intermetallics.....	18571
		Armillaria root rot.....	17472

# JANUARY-DECEMBER

	Entry
Armistead, N. L., address, Nov. 4, 1963	20665
Armored cars, M-113 vehicles adaptation kits, overpricing under Army Dept. contract negotiated with FMC Corp., San Jose Calif., GAO report	13999
Armory Board, D.C., see District of Columbia Armory Board.	
Armour and Co., wage chronology, 1941-63	20926
Arms (firearms), see Firearms.	
Arms control, see Disarmament.	
Arms Control and Disarmament Agency:	
annual report—	
departmental edition	9647
document edition	9833
appropriations authorization and security procedures for contractor employees, amend act—	
hearings	10013, 18942
reports	11981, 20471, 20483
appropriations, 1964—	
hearings	11874
report	11848
Armstrong, Frank C., Bannock thrust zone, southeastern Idaho	8336
Army:	
active, for rapid response to any emergency situation	99
AFGT 7 and 8 failures, literacy screening scales, development—	
aircraft, ALARM system application	18348
aircraft, personnel restraint systems study, basic concepts	11349
airfield and heliport rigid and overlay pavement, engineering and design manual	4862
airmobile operations, field manual	18544
American military insignia, 1800-51	14607
aviation accident prevention pamphlet	9658
Aviation Crash Injury Research, Flight Safety Foundation, Inc., final report, Sept. 16, 1961-Dec. 15, 1962	20204
aviation digest	4256
aviation, use of meteorology, technical manual	20327
civilian personnel, dependents traveling to oversea areas, information, pamphlet	18552
combat vehicles, unnecessary deterioration of unused rubber tracks, GAO review	6540
contracts of \$1 million and over, prime contractors, listing	3593
contributions to development of Alaska, 1867-1962	11545
delay in equipping M151 utility trucks for airborne operations, GAO report on unnecessary costs	12217
dental facilities, training civilian volunteer assistants, pamphlet	18550
division medical service, Infantry, etc., divisions, field manual, change	18543
divisions, new structure, pamphlet—enlisted men, classification, new techniques, status, June 30, 1962	7678
failure to standardize tropical wool trousers, unnecessary costs incurred, GAO report	4465
finance service and administration, pamphlet	20722
food irradiation program, review, hearing	108
heritage, pamphlet	15164
	16824

	Entry
Army—Continued	
Indonesian national, development and problems, etc.	12275
information digest	3466
installations and major activities in continental U.S., list—	109, 14943
installations, emergency construction, selection of sites	434
irradiated food wholesomeness program, review	13246
Judge Advocate legal service, pamphlets	106, 1801-4, 4454-55, 5912-13, 7670-73, 9656-57, 11535-536, 13237, 14941-942.
military personnel ordered to Puerto Rico, helpful hints, pamphlet	16825
military personnel, dependents traveling to oversea areas, information, pamphlet	18552
mission agreement—	
Costa Rica	14728
Panama	5737
El Salvador	14726
nuclear power program	19129
OCS, general information for applicants	14938
off-road logistic mission, operational analysis of use of air cushion vehicles	20205
officers, career counseling, commander's guide	11541
personnel—	
anti-tank missile gunners, selection	4467
correlates of disciplinary record in wide-range sample	4463
personnel utilization—	
human factors problems in image interpretation task, status report	16830
human factors research in image systems, status report	11546
physical fitness program—	
female special staff personnel and TD organizations, DA pamphlet	1800, 14940
specialists and staff personnel, DA pamphlet	1799, 7669, 14939
procurement legal service, pamphlets	110, 1806, 4457, 5917-18, 7679-80, 9659-61, 13239, 14945-946, 16826-827, 18553
procurement procedure, changes	5908, 7665, 9648, 14936, 18540
progress, 1963	18558
publications, price list	1394
recruiting & career counseling journal	4136
register, Jan. 1, 1963—	
departmental editions	7682, 9664-65
document editions	7851, 9831-32
Regular, general officer promotion policy, hearing	12006
research and development magazine	3467
research and development series	7683
sites, engineering weather data, manual	16828
staff judge advocate handbook, pamphlet	18546
survival sense, pamphlet	18547
Tank-Automotive Center, Detroit, Mich., ineffective repair parts support for combat vehicles, GAO review	8315
transportation aircraft maintenance units, field manual	14937
troop topics	13238, 16824
trucks, failure to store in covered space, GAO review	10270

# INDEX 1963

Entry	Entry
Army—Continued	Army Department—Continued
United States Army in World War II ..... 9'07, 12819-820	technical manuals..... 112-113, 1807-10, 4458-59, 7681, 9662-63, 11542-544, 13241-244, 14947, 16828-829, 18556-557, 20327-328.
see also Military supplies—National Guard—Pay, allowances, etc.	teletypewriters, procurement under negotiated contracts, overpricing by Smith Corona Marchant, Inc., GAO report..... 14000
Army Audit Agency:	transponders for Nike-Hercules guided missile system, overprocurement, GAO report..... 14001
auditors, examination announcement..... 11662	unnecessary expenditures for—
bulletins..... 115, 4249	exterior storage facilities serving family housing at Fort Dix, GAO report..... 14010
career opportunities, professional auditing..... 4468	leasing commercial facilities to store Govt-owned empty steel drums, Los Angeles, Calif., area, GAO report..... 20720
Army contracts, see Government contracts.	unnecessary procurement of generators, GAO review..... 6541
Army Dental Corps, preventive dentistry program and dental practice..... 13247	Army Electronics Materiel Agency, rejection of low bid on procurement of AN/GRC-19 radio sets, GAO review..... 6536
Army Department:	Army Engineer Research and Development Laboratories, Technical Liaison Office, press releases..... 4097
adaptation kits for M-113 vehicles, overpricing under contract negotiated with FMC Corp., San Jose, Calif., GAO review..... 13999	Army hospitals, see Military hospitals.
Aerodex, Inc., contract, use of former Govt. surplus parts without authorization, GAO report..... 20726	Army Library:
aeronautical replacement spare parts, noncompetitive procurement, GAO follow-up review..... 13996	catalog of books on American Civil War, special list..... 5777
air conditioners, unnecessary planned procurement, GAO report..... 15600	checklist of periodicals currently received, special list..... 5778, 7524
appropriations, 1964—	special lists..... 5777-78, 7524
military construction, hearings..... 17161	Army Management School, Fort Belvoir, Va., management views (speeches)..... 11534
public works, hearings..... 17162	Army Map Service, technical report..... 20649
Army regulations..... 13236, 20325	Army Materiel Command:
canvas and curtains for cargo trucks, defective, procurement, GAO review..... 10268	AMC pamphlets..... 1797, 4442, 7604, 13235, 16822, 20321-324
chiefs and executives, organization chart..... 3764	contractors guide for civilian agencies seeking business..... 16823
civilian job opportunities..... 11531	first year, review and analysis of activities..... 18539
civilian personnel pamphlets..... 4443-59, 5909, 18541	Army Medical Research and Nutrition Laboratory, Fitzsimons General Hospital, reports..... 1811-13, 7685-87, 11547-549, 13245-246
combat readiness of unit at Fort Meade, impairment from lack of repair parts, GAO review..... 15592	Army Medical Service, medical science publication..... 116
cooperative education program..... 18548	Army Missile Command, RT-TR series..... 18263
electronic spare parts, overpricing under fixed price contracts with Borroughs Corporation, GAO review..... 8316	Army missions, see Military missions.
field manuals..... 100-101, 5910, 7666-67, 9651-54, 11532-533, 14937, 18543-544	Army National Guard, see National Guard.
fire extinguisher replacement program, excessive costs, GAO review..... 8314	Army Nurse Corps, see Nurse Corps, Army.
fuel truck tankers, unnecessary costs incurred by use of inadequate interior protective coating, GAO report..... 20723	Army officers, see Army.
J-2 gyro magnetic compass components, unnecessary procurement and repair costs, GAO report..... 20724	Army Ordnance School, special text ST series..... 12962
manpower procedures handbook, pamphlet..... 14944	Army Personnel Research Office:
pamphlets..... 102-110, 1799-1806, 4451-57, 5911-18, 7668-80, 9655-61, 11535-541, 13237-239, 14938-946, 16824-827, 18545-553, 20326	research publications, 1962, abstracts..... 4461
poster..... 18554	USAPRO technical research notes..... 4461-63, 7684, 11546, 14948-949, 16830-831, 18559
publications, price list..... 1394	USAPRO technical research reports..... 4464-67, 11546
report, 1962..... 10038	Army Reserve:
rocker arm assemblies for combat vehicle engines from Hawk Tool & Engineering Co., Clarkston, Mich. defective, procurement, GAO review..... 19285	Army reservist (periodical)..... 3468
supply manual..... 18542	officers, career planning..... 11537
	see also Reserve components of Armed Forces.
	Army Stock Fund, illegal transactions, GAO report..... 14013

# JANUARY-DECEMBER

	Entry
Army Transportation Research Command, technical reports --	3383-85, 5758, 7461-86, 9465-67, 11349-351, 13098-100, 14749-753, 16631-632, 18348-354, 20203-208, 21141-143.
Arner, Dale H., wild turkeys on south-eastern farms and woodlands--	20285
ARNG, see National Guard.	
Arnow, Ted, ground-water geology of Bexar County, Tex.-----	14029
ARO, see Aerospace Research Office.	
Aromatic compounds, bibliography--	1870
Aronow, Morris, and other employees of Post Office Department, relief -----	7090
Aroostook County, Maine:	
manganese deposits, Hodgdon and Linneus Townships, investigation -----	3077
Maple and Hovey Mountains area, geology and manganese deposits -----	6554
Arresting gear, BAK-6/F-27A aircraft arresting barrier absorber, evaluation-----	16773
Arrowgrass, livestock poisoning in Western States, reducing losses -----	14856
ARS, see Agricultural Research Service.	
ARS series -----	8-13, 1622-44, 4337-43, 5790-99, 7540-47, 9537-47, 11431-441, 13155-156, 14832-841, 16711-714, 18390-406, 20261-264.
Arsenic oxide, vapor pressure, metal diaphragm apparatus for measuring -----	9136
Art:	
arts and National Government, report to the President-----	17192
print as Senate document, report -----	13763
fine arts education in Soviet Union -----	19100
oriental studies -----	583
visual, graphics, exhibits, displays and supplementary services incidental thereto, term contract -----	2283
works and reproductions, catalog of copyright entries -----	4790
see also Paintings.	
Artesian wells, British Guiana, coastal basin, ground-water conditions -----	15619
Arthritis, health information series--	10502
Arthropods, affecting health and comfort of man, classification and coding systems for compilations from world literature--	1437
Artichokes, globe, effects of pre-cooling on market quality-----	20286
Articles and speeches of H. Choybalsan, Mongolia-----	5249
Articles of Confederation, text-----	9953
Artificial radiation belt made on July 9, 1962 -----	9171
Artificial recharge of ground water (series) -----	612
Artificial respiration, see Respiration.	
Artificial satellites, see Satellites.	
Artillery:	
border troops, Soviet translations, field, target acquisition, field manual -----	19407
Artists:	
and groups, performing, waiver of visa fees, agreement-----	9429
performing arts, discrimination practices, investigation, hearings-----	7993
Artists' material, oil paints, standard of trade-----	9703

	Entry
Asbestos:	
deposits and bedrock geology, upper Missisquoi Valley and vicinity, Vt.-----	19292
minerals yearbook chapter-----	18063
Ascorbic acid, see Vitamins.	
ASD, see Aeronautical Systems Division.	
Asepsis, maintenance in hospitals, design features affecting-----	9343
Ash (tree):	
white, seedbed, overstory, and understory on regeneration, effects -----	10239
Asher, William C., squirrels prefer cones from fertilized trees-----	12183
Ashizawa, Roy Y., mineral industry of Hawaii-----	19848
Ashland, Ky., area redevelopment manpower report-----	17399
Ashland, Wis., port, harbor conditions, etc-----	10089
Ashland Oil & Refining Co., aircraft accident -----	13313
Ashley, E. Everett, nonwhite population and its housing-----	14041
Ashley, Victor L., relief -----	7-91
Ashley Lykes (S.S.):	
launching (remarks)-----	3050
Ashtabula, Ohio:	
railroad accident-----	12267
redevelopment area, statistical profile -----	4655
Asia:	
contributions to hydrology of Asia and Oceania (series)-----	17530
east, monsoon winds, problems concerning -----	14277
health information for travel-----	16498
labor organizations, directory-----	19364
lights and fog signals, list-----	9259
Pacific Coast, tidal current tables-----	18742
population problems, critical decades -----	296
south and east--	
7 years of reconstruction in Cambodia -----	12457
translations -----	2504,
6769, 10514, 12451, -----	12506,
12611, 14147, 14301, -----	15853,
15962, 16060, 16078, -----	16113,
16143, 16180, 16196, -----	16212,
17596, 17625, 17661, -----	17726,
17789, 17969, 19377, -----	19458,
19497, 19590, 20789, -----	20834,
20868.	
southeast--	
and Viet Nam, report-----	6298
education, bibliography-----	8183
flight information publication--enroute Pacific and southeast Asia -----	3695
planning, air traffic control procedures -----	3763
planning data-----	3698
terminal high altitude-----	3768
terminal low altitude-----	3710
problems, fact sheet-----	5725
study mission, report-----	11918
print as Senate document, report -----	8076
southwest, flight information publication, terminal low altitude--	3709
students from Asia, West German assistance -----	5365
Asiatic rice borer, general information -----	14884
ASM, see American Society for Metals.	
Asparagus, canned, U.S. standards for grades-----	11429
Aspartic acid:	
salts (Mg and K), effects on performance of--	
men -----	7485
rats and dogs-----	7686



# INDEX 1963

	Entry		Entry
Aspect ratio, <i>see</i> Wings (aircraft).		Astronautics—Continued	
Aspen:		NASA manned space flight team, qualifications and training program	12845
Colorado, decay associated with <i>Fomes igniarius</i> sporophores	17490	optimum low-acceleration trajectories for interplanetary transfers	3131
pulp, semichemical corrugating, bleachability	19267	Project Mercury—	
12-year hybrids, survival and growth compared to native Wisconsin stock	15569	chronology	19904
Asphalt, <i>see</i> Roofing.		summary, including results of 4th flight, May 15-16, 1963	19902
Asphyxia, mechanical, cause of clinical death, restoration of vital functions, USSR study	2900	psychiatric aspects of SAM 2-man cabin simulator	18500
Aspinall, Wayne N., addresses, May 24, 1962-Aug. 14, 1963	18047	psychological research, USSR study	15805
Aspirators, for taking air samples, Model 822, USSR study	8704	publications, list	14052
Aspirin, effects of acetylsalicylic acid on man's skin temperature in cold environment	18481	Schirra's flight, Oct. 3, 1962	3169
Asateague Island, outstanding recreation values as national seashore (remarks)	20751	sighting problems associated with sextant type measurements for space navigation	9165
Assessed values for property taxation	152	Soviet development of space travel, translation	722
Assets and liabilities, <i>see</i> Banks and banking—Federal reserve member banks.		space flight analysis and celestial mechanics	5543
Assistance, <i>see</i> Public assistance.		space rendezvous control, study of human pilots' ability to detect angular motion	1296
Assistance for workers under Trade expansion act of 1962	3013	space rendezvous, effects of display noise on pilot control of terminal phase	16365
Assistant secretaries, <i>see</i> for departmental assistant secretaries, names of departments or names of secretaries.		space travel, present and future, USSR studies	17834
Association of Universalist Women: consolidate with Alliance of Unitarian Women—		structures for space operations—triumph of L. Gordon Cooper, Jr., May 15-16, 1963	5533
law	11711	velocity, acceleration, weightlessness, USSR study	16412
report	11948	<i>see also</i> Bioastronautics.	15979
Associations, <i>see</i> Trade associations—also subject with which association has to do.		Astronauts.	
Asteroids, <i>see</i> names of asteroids.		ability to detect angular motion with application to control of space rendezvous	1296
Asthma, New Orleans, air pollution investigation, report, preliminary	1400	control of terminal phase of space rendezvous, effects of display noise	16365
ASTIA, <i>see</i> Armed Services Technical Information Agency.		mission of man in space	14536A
Astrobiology, <i>see</i> Space biology.		NASA manned space flight team, qualifications and training program	12845
Astrodynamic, consistent system of astrodynamic constants	14547	qualifications for selection and training, committee print	2061
Astronautics:		space pilots, aeromedical evaluation	14897
Apollo terminology	18131	steroid and catecholamine studies on pilots during prolonged experiments in space cabin simulators	16807
aviation and astronautics conference in Israel, translations	12398	triumph of L. Gordon Cooper, Jr., May 15-16, 1963	16412
cosmic flights and science, USSR study	15846	what is an astronaut, USSR study	17909
cosmic flights of Vostok-5 and Vostok-6, USSR study	19440	Astronomic time switches, <i>see</i> Electric switchgear.	
earth-moon space, trajectories with symmetrical free return properties, lunar flight study series	12883	Astronomical observatories, orbiting, orientation and control	5604
emergency midcourse navigation procedure for space vehicle returning from moon	7201A	Astronomy:	
events of 1962, NASA report	13069	abstracts pertaining to Communist China in Soviet journals	987, 10765, 12361, 15995
Fridrikh Arturovich Tsander, first engineer, USSR	1123	acta astronomica Sinica, translations	16109
human engineering principles of design for in-space maintenance	7509	astronomical papers	7844, 10987
lunar landing missions, trajectory entry conditions at lunar sphere of influence applicable to near-moon trajectory and impact conditions	14563	astronomical phenomena, 1966	11134
lunar mission, prediction of velocity requirements for minimum time aborts	11630	detector for low energy gamma-ray experiments	9172
man in space flight, USSR study	17015	magnetic field of Crab Nebula and its central star	1320
manned space flights, third U.S. orbital, results	5540	meteors, symposium, proceedings, Aug. 28-Sept. 1, 1961, papers	14093
medical and biological aspects of space flights, USSR studies	761	neutrino, Hungarian study	8004
membrane strip analysis	14578	new, world in space	9141
		publications, price list	3204
		research in space exploration, papers	5541

# JANUARY-DECEMBER

	Entry
Astronomy—Continued	
Soviet and Chinese articles, English abstracts	3627
Soviet bloc research	4200
Soviet cataloging of faint stars in Southern Hemisphere	12352
Soviet reports	5247
USSR conferences and research, translations	20885
see also Astrodynamics—Radio astronomy.	
Astrophysics:	
Instrumentation for research	50,
5877, 7618, 9616-17, 18400	
Smithsonian contributions	1496,
1380, 14602-604, 18310, 20131-132.	
ASWHP, see Armed Services Whole Blood Processing Laboratories.	
Asymptotic solutions, see Mathematics.	
At close quarters, PT boats in United States Navy	5653
Atarashi rosen (periodical): translations	2800
Atchafalaya River:	
Morgan City, La., to Gulf of Mexico, flood control survey, etc., engineer report	2178
departmental edition	2001
document edition	2001
Atchison, Kans.:	
White Clay Creek, engineer report	2233
departmental edition	2080
document edition	2080
Atchison, Topeka and Santa Fe RR., accident	6637, 10360
Atglen, Pa., railroad accident	10358
Atheism:	
Lithuanian atheists converting Catholics, methods used	17679
scientific, USSR propagandizing as honorable task	17729
Athens, Ga., population, special census	15074
Athletic goods, see Sporting goods.	
Atherosclerosis:	
cholesterol uptake, micro method for measuring	70
problems, conference, USSR	859, 1074
Atkins, C. H., panel presentation, Oct. 3, 1962	1402
Atkins, L. C., & Son, relief	13507, 20414
Atkinson, J. H., new look at farm debt picture	2273
Atlanta, Ga.:	
census of housing, 1960, standard metropolitan statistical area, components of inventory change	1903
consumer expenditures and income, 1960, advance report	1166
supplement	7151
income, education, and unemployment in neighborhoods	10912
investigation and study of Federal Home Loan Bank Board, hearings	2040
metropolitan centers, outdoor recreation, present and future	2348
Municipal Airport, weather observations, hourly, decennial census	11300
occupational wage survey	16282
departmental edition	15173
document edition	3472
Atlatlan (periodical)	3472
Atlantic Beach, N.C.:	
beach erosion control study, engineer report	406
departmental edition	205
document edition	205

	Entry
Atlantic City, Wyo., Precambrian iron deposits	10285
Atlantic Coast:	
coast pilot—	
Cape Cod to Sandy Hook, supplement	7708
Cape Henry to Key West, supplement	6037
Eastport to Cape Cod, supplement	4636
Gulf of Mexico, Puerto Rico, and Virgin Islands	1957
Sandy Hook to Cape Henry, supplement	6036
coastal warning facilities chart, Cape Hatteras, N.C., to Brunswick, Ga.	11882
Continental Shelf and slope, program for study	10307
light lists—	
Little River, S.C. to Rio Grande, Tex., and Antilles	4641
St. Croix River, Maine, to Little River, N.C.	4640
north, longshoring, wage chronology, 1934-61	7144
North America, tidal current tables	18741
oceanographic observations, 1960	13972
port series report	19817
southeastern, snapper trawling explorations	8272
storm warnings facilities charts—	
eastern Florida	3400
Mannassan, N.J. to Cape Hatteras, 1963	11384
transportation lines	6377
Atlantic Coast Line RR., accident	2451
Atlantic merchant vessel report (AMVER) system	11676
Atlantic Ocean:	
and modern geophysics, USSR study	14298
menhaden fishing, distribution by purse seine vessels, 1955-59	8281
north—	
aircraft accident	18711
atmospheric electricity measurements	11175
flight information publication—	
planning, air traffic control procedures	3702
planning data	3697
International Ice Patrol	11678
western, Mullidae, development and distribution of larval and juvenile fishes	2287
North Atlantic region, air traffic survey, 1962	9455
northwest—	
fisheries convention of 1949, multilateral understanding	16602
tunas in oceanic waters, distribution	4952
notice to mariners	3973
problems and trends in Atlantic partnership, staff study	11021
print as Senate document, report	11980
radio navigational aids, 1962, change	7354
radio navigational aids, 1963	14622
radio weather aids	21054
South, humpback whale feeding, periodicity, USSR study	8767
weather stations agreement, amendment	9433
Atlantic States:	
cost of transporting freight	5102
earnings in shellfish processing industry	9064
middle—	
census of housing, 1960, standard metropolitan statistical areas, tenure, rooms, condition and plumbing, etc.	1911

Do not order from index; see indicated entry

Page 103

# INDEX 1963

	Entry
Atlantic States—Continued	
middle—continued	
county business patterns, activities covered by OASDI program.....	13281-282,18670-671
economic effect of textile mill closings in selected communities.....	11685
fisheries, 1962, annual summary.....	29685
soils of northern coastal plain, conservation methods.....	7559
south—	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics.....	4568
census of housing, 1960, standard metropolitan statistical areas, tenure, rooms, condition and plumbing, etc.....	1914
county business patterns, activities covered by OASDI program.....	15051-52
fisheries, summary, 1962.....	20686
strawberry culture.....	1690
Atlas missile, <i>see</i> Missiles.	
Atlas of monthly mean stratosphere charts, 1955-59, pt. 2, July-December.....	4390
Atlases:	
Berthelmann's great world atlas, Dutch reviews.....	12505
copyrighted—	
Jan.-June 1962.....	10027
July-Dec., 1962.....	13828
eastern Pacific marine game fishing geographical, in Library of Congress, list.....	10227
national atlas of United States, separate sheets.....	16302
Navy marine climatic, Arctic Ocean.....	3402, 14801, 21176
rainfall frequency, Hawaiian Islands.....	12961
USSR, diurnal amplitudes of air temperature.....	1593
temperature.....	2510
Atmosphere:	
absorption cross sections for wavelengths less than 3000 Å.....	19895
atmospheric band absorptions from laboratory data, interpolation procedure for calculating.....	12902
chemical reactions, German study.....	19575
clear standard model for attenuation in visible region and infrared windows.....	20302
closed space environment, submarine, experiences.....	7189
cross sections of temperature, pressure, and density.....	11036
daily aerological cross sections, pole to pole along meridian 75° W for IGY.....	7506, 9492, 14778
densities and temperatures, drag determinations for artificial satellites.....	18310
density distribution, interlevel correlations with wind.....	1750
F region, thermal balance.....	1333
Mars and Venus, determining characteristics from gas-dynamic behavior of probe vehicle.....	9184
NO <sub>2</sub> in Martian atmosphere.....	18119
nuclear submarine—	
decontamination.....	11162
purification and control, status of chemical research.....	11165
origin of atmospheric xenon.....	5607
oxygen-rich, effect on cerebral lipid peroxides.....	9106
part of space environment.....	3125
physics, journal of research, National Bureau of Standards.....	3818

	Entry
Atmosphere—Continued	
planetary, role of interplanetary debris.....	19893
radio astronomy aspects, bibliography.....	11100
radioactive tungsten, USSR study.....	6762
radioactivity—	
fallout research supported by Division of Biology and Medicine, AEC.....	9689
sampling, by means of balloons, agreement with Australia.....	7439
Washington, D.C.....	11153
rhodium-102 high altitude tracer experiment, stratospheric results.....	1732
space cabin—	
gas chromatographic measurement of trace contaminants.....	7293
selection, oxygen toxicity.....	18102
space density of atmospheric dust in altitude range 80,000 to 90,000 ft.....	1496
spacecraft, analysis.....	11167
stable and unstable, hydrodynamic calculation of orographic cloudiness, USSR study.....	10820
structure and its variations in lower thermosphere.....	16772
turbulent moment, heat and matter transfer, relationships among coefficients.....	5188
U.S. standard atmosphere, 1962.....	7303
upper—	
climatology as related to design and operation of supersonic aircraft.....	11381
density measurements from—	
Air Force satellite.....	11480
falling sphere.....	11479
determination of atmospheric parameters by use of rocket-borne mass spectrometers.....	18123
mass spectrometric investigations between 100 and 227 kilometers above Wallops Island.....	16387
sounding rockets, development in Japan.....	7294
USSR observations during IGY.....	12365
USSR research.....	19714
Venus, photochemical problems.....	11591
Weather Bureau's research toward understanding the atmosphere.....	21177
<i>see also</i> Air—Ionosphere—Stratosphere—Troposphere.	
Atmospheric electricity:	
measurements—	
Elbrus region, USSR study.....	20896
Mauna Loa Observatory, results.....	5771
North Atlantic for fog forecasts.....	11175
NRL semiautomatic station.....	3229
Atmospheric entry:	
aerodynamic characteristics of 9° cone configuration, etc., at angles of attack up to 180°.....	7265
Ames simulator and its application to determination of ablative properties of materials for ballistic missiles.....	11006
expansion tube for producing high enthalpy gas flows.....	5614
ICBM, glass shields, heating and melting process.....	11037
inertial navigation errors.....	11052
longitudinal range attainable by constant-altitude variable-pitch reentry maneuver.....	12881
moving cockpit simulator study of piloted entries for capsule-type vehicle at parabolic velocity.....	11068

# JANUARY-DECEMBER

Entry	Entry
<b>Atmospheric entry—Continued</b>	<b>Atomic energy—Continued</b>
nylon as ablative material for ballistic missiles.....	development, and tasks of electrical and machine building industries, Yugoslav study.....
radio attenuation, 4-stage rocket to measure.....	direct energy conversion and systems for nuclear auxiliary power (SNAP), literature search.....
rocket vehicle configurations, static aerodynamic characteristics at Mach numbers from 1.80 to 4.63.....	East Germany, nuclear research and technology.....
rotating planet, Z-function solutions for motion and heating during equatorial orbits.....	equipment for use by Institute of Biophysics of University of Brazil, agreement with Brazil.....
tektites, lunar origin.....	fundamental nuclear energy research, 1962, AEC special report.....
Atmospheric friction layer, see Friction layer.	heat source for solid-fuel gasification.....
Atmospheric gases, see Gases.	industrial participation in power program (remarks).....
Atmospheric pollution, Poland.....	industry, development, growth, and state, 1963, hearings.....
Atmospheric pressure:	pta. 1 and 2, print additional copies, reports.....
cross sections of pressure near 80th meridian west, analyses.....	industry, development, USSR translation.....
decreased barometric pressure effects on—	international agency's role in developing nuclear power, U.S. viewpoint (remarks).....
maximum pressure-volume relationships of respiratory system.....	legislation through 87th Congress, 2d session.....
oxygen consumption.....	literature—
normal and synthetic, prolonged exposures of animals.....	bibliographies issued or in progress.....
Atmospheric temperature, see Temperature.	what's available.....
Atom at Ames, remarks.....	materials and equipment for Radiation Medicine Centre, agreement with India.....
Atomic bombs:	materials, metallic fuel element, aircraft nuclear propulsion program.....
explosions, nuclear bomb effects computer, including slide-rule design and curve fits for weapons effects.....	naval nuclear propulsion training program, information.....
injuries from explosions, USSR translations.....	nuclear energy (East Germany periodical), translations.....
<b>Atomic energy:</b>	nuclear materials management, AEC and contractors symposium.....
AEC objectives, actual and alleged, in nuclear power field (remarks).....	nuclear materials, private ownership, hearings.....
AEC program, trends, and new developments in nuclear power (remarks).....	nuclear powered supercritical-water cycle for aircraft propulsion, analysis.....
aerospace nuclear safety (remarks).....	nuclear propulsion conference, proceedings, Aug. 15-17, 1962.....
Ames Laboratory research, etc. (remarks).....	nuclear theory reference book—
application of method of partial separation of variables to 2 equivalent p-electrons.....	1957-58.....
Army nuclear power program.....	1959-60.....
biomedical revolution now in progress (remarks).....	our atomic world, story of nuclear energy.....
civil engineering bibliography on design and construction of nuclear facilities.....	peaceful uses—
civilian nuclear power, report to the President, 1962.....	atom's promise (remarks).....
appendices.....	energy of atom serves communism, USSR study.....
civilian nuclear power program—	private industry's role (remarks).....
economic benefits from continuing evaluation.....	products, current industrial reports.....
Nation's future (remarks).....	program, bibliographies.....
code of Federal regulations.....	programs, major activities.....
continuity of corporate management in event of nuclear attack.....	propulsion for aircraft, 3 cycles.....
cooperation for civil uses, agreement with—	propulsion for space and auxiliary power, hearings, index.....
Colombia.....	publications, price list.....
EURATOM and various other countries, hearing.....	radiation, biological effects, bibliography.....
Great Britain.....	research—
Greece.....	Agricultural Research Laboratory, University of Tennessee, progress reports.....
Panama.....	Bulgarian Academy of Sciences, Atomic Center.....
cooperation for mutual defense purposes, agreement with Belgium.....	Latvian SSR.....
hearing.....	New Brunswick Laboratory, progress reports.....
cooperative agreement with Japan, safeguards by IAEA, agreement.....	

# INDEX 1963

	Entry
Atomic energy—Continued	
science and engineering of	
Hungary -----	798
space nuclear power applications,	
hearings -----	1970
spacecraft, orbit-launched vehicle	
design, etc., for escape and	
planetary missions -----	12849, 19908
studies of sites for nuclear energy	
facilities (series) -----	2341,
14016, 14018, 17526	
understanding the atom series -	20333-336
USSR exploitation -----	10775
Atomic Energy Agency, International,	
see International Atomic	
Energy Agency.	
Atomic Energy Commission:	
AEC-naval reactor program re-	
port, hearing -----	208
AEC research and development	
reports -----	118-141,
1816-42, 4469-97, 5921-49,	
7688-7717, 9667-92, 15552-585,	
14953-15018, 16833-861, 18561-	
601, 20330. -----	4508, 15024
price list -----	
appropriations, 1964—	
authorizing—	
hearings -----	15162
law -----	15151
reports -----	13570, 13588, 13740
public works, hearings -----	18920
Biology and Medicine Division—	
atmospheric radioactivity and fall-	
out research -----	9689
onsite ecological research, list-	
ing of projects, etc. -----	1841
budget, 1964, amendments -----	9838, 18813
civilian technology, methods of pro-	
moting growth (remarks) -----	18608
community at Nevada Test Site,	
establish hearings -----	20446
contracts for procurements of alu-	
minum caps and cans without	
adequate pricing data—	
by General Electric Co. and Alu-	
minum Co. of America, GAO	
review -----	12211
E. I. duPont de Nemours Com-	
pany of America and Aluminum	
Company of America, GAO re-	
port -----	14003
effective collaboration with national	
laboratories and universities	
(remarks) -----	13251
electronic data processing equip-	
ment use, hearing -----	17182
employees' housing, provide mort-	
gage insurance, extend author-	
ity—	
law -----	18778
report -----	17285
financial report, 1963 -----	20331
fuel cycle program, design and fabri-	
cation of basic fuel assemblies -	
fundamental nuclear energy re-	
search, 1962, special report -----	9696
Internship and training programs	
for college graduates -----	18606
K-27 tube sheet assemblies, over-	
pricing under cost-type contract	
procured from Fairbanks,	
Morse & Co., by Union Carbide	
Nuclear Company, GAO report -	
14951-952, 15019-21	
licensing guides -----	19284
lithium hydroxide, monohydrate	
procurement contracts, GAO	
review -----	8322
manned aircraft nuclear propulsion	
program, GAO review -----	6534
nuclear materials, private owner-	
ship, hearings -----	18790
nuclear power program, trends and	
new developments (remarks) -	
18604	

	Entry
Atomic Energy Commission—Continued	
objectives, actual and alleged, in	
nuclear power field (remarks) -	
programs, major activities -----	20329
Project Gnome, methods and costs	
of shaft sinking -----	20949
purchase orders issued by Sandia	
Corporation under contract	
with AEC, GAO review -----	6538
purchasing offices directory -----	13252
radioactive material shipments,	
incidents involving, 1957-61,	
summary -----	139
releases -----	4038
report, 1962—	
departmental edition -----	5950
document edition -----	6216
index -----	11588
research and development ab-	
stracts—	
biology and medicine, progress -	
list -----	15002
research in chemistry (off site),	
summaries -----	4145
research reports available from	
OTS -----	15001
rules and regulations, revised	
pages -----	4552
selling to AEC, procurement pro-	
gram and organization -----	18603
technical information bulletin -	
translation title list and cross re-	
ference guide, supplement -----	13252
welding conferences, minutes of an-	
nual meeting, 1960 -----	4498
welding forum, papers -----	11582
15005	
135	
Atomic Energy Joint Committee:	
committee print -----	6064
hearings -----	208,
19867-70, 4665, 6063,	
13437, 15162-164, 18790,	
20446	
membership, publications, etc.,	
through 88th Cong., 1st sess.,	
reports -----	6064
11957, 13570, 13740	
Atomic ordinance, Federal item identi-	
fication guides for supply cata-	
loging, supplements -----	3660
Atomic piles, see Reactors (atomic).	
Atomic polarizabilities, and shielding	
factors -----	18120
Atomic power, see Atomic energy.	
Atomic power plants, see Nuclear re-	
actor power plants.	
Atomic ships, see Nuclear powered	
ships.	
Atomic warfare:	
children's responses to nuclear war	
threat -----	16913
operational recovery procedures,	
FAA facilities -----	8217
Atomic weapons, see Weapons.	
Atomization, jet, theory of process -	
21010	
Atoms:	
absorption coefficient in reverse	
Zeeman effect with arbitrary	
direction of magnetic field -----	18170
carbon, configuration interaction -	
dissociated, internary mixture with	
diatomic molecules and inert	
gas, unsteady diffusion with	
recombination -----	18174
ion-atom collisions, lectures -----	7278
multivalent, generalization of	
theory of partial separation of	
variables -----	7313
partition function in interior of	
plasma, mathematical problem	
of determining eigenvalues of	
differential equation -----	20977
understanding the atom series -	
20333-336	
Atom's promise (remarks) -----	1844



# JANUARY-DECEMBER

Entry	Entry
Atropine:	Auditory perception, <i>see</i> Perception.
anti-Parkinson drug, effects on	Audubon, John J., 5-cent commemorative stamp (poster)-----
shivering in cats-----	11493
effect on EEG activation response-----	5886
synthetic atropine-like substances, USSR study-----	14159
ATS fact book (periodical)-----	5895
ATS manuals-----	90, 1781, 4425-26, 5896-99, 9640, 11519, 13222-228, 14924-925, 16809, 18522-524
Attachment, District of Columbia non-residents, exemptions, amend act, report-----	18894
Attempts of pro-Castro forces to pervert American press-----	4784
Attenuation:	
clear standard atmosphere model for determining in visible region and infrared windows-----	20302
error as function of vane-angle error for rotary vane attenuators, table-----	12901
radio, during reentry, rocket to measure-----	7268
telemetering signals by ionized flow fields surrounding reentry bodies-----	16378
voice-frequency loading for trunk cables-----	3315
Attenuators, rotary vane, rotation errors, table-----	12901
Attitude (psychology):	
and public opinions about mental health-----	19968
attitudes and career intentions of Air Force Officer Training School students-----	63
enlisted submarine school graduates, follow-up study on attitude, performance, and achievement levels-----	9103
Attix, F. H., dosimetry by solid state devices-----	3227
Attorney General, <i>see</i> Justice Department.	
Attorneys, <i>see</i> Lawyers—Public defender.	
Attracting new industry-----	7656
Auctions:	
livestock—	
how packers and stockyards act applies-----	13140
markets, regulation, hearings-----	9918
Audio oscillators, <i>see</i> Oscillators.	
Audio-visual education:	
improving learning environment, local preparation of visual instructional materials-----	20636
international circulation of visual and auditory materials, agreement report-----	20539
Audiology, test for speech discrimination composed of CNC monosyllabic words-----	7634
Audiometry, parameters, relationship to speech discrimination of hearing-impaired individuals in noise-----	14918
Auditing:	
career opportunities with Army Audit Agency-----	4468
federally chartered corporations, uniform requirements, report-----	9911
management audit for small manufacturers-----	7428
<i>see also</i> for audit reports, names of corporations, etc.	
Auditor General, Air Force auditors, examination announcement-----	11662
Auditor General, Navy, auditors, examination announcement-----	11662
Auditors:	
examination announcements-----	1937, 7780, 11661-662, 20377
amendment-----	11659
	Aural perception, <i>see</i> Perception.
	Auerbach, Stanley I., onsite ecological research of Division of Biology and Medicine at Oak Ridge National Laboratory-----
	1841
	Augers, large-diameter, uses in underground mining of pitching anthracite beds-----
	3092
	Augusta, Ga., Bush Field, weather observations, hourly, decennial census-----
	21157
	Aukland, Merrill F., plasma physics and magnetohydrodynamics, ASTIA report bibliography-----
	4439
	Auplopus, <i>see</i> Wasps.
	Aurantine, fractions, formation of chemical and biological properties, USSR study-----
	8852
	Auroras:
	bremstrahlung, effect on lower ionosphere-----
	21006
	fading correlation bandwidth and short-term frequency stability measurements on high-frequency transauroral path-----
	5620
	polar, USSR study-----
	10523
	spectral, electrophotometrical and radar researches-----
	3165
	USSR studies of aurora borealis-----
	8635
	Austin, Tex.:
	consumer expenditures and incomes, 1960, advance report-----
	7156
	Municipal Airport, weather observations, hourly, summary, decennial census of climate-----
	14795
	Austin Junction, Tex., railroad accident-----
	17570
	Australasia, labor organizations, directory-----
	19364
	Australia:
	around world with Bob Poage, report on recent trip to-----
	2046
	east coast, sailing directions, change-----
	12938
	economy, basic data-----
	8384
	establishing business-----
	19355
	gas appliances, household and commercial, U.S. market-----
	147
	health information for travel-----
	16498
	import tariff system-----
	5082
	lights and fog signals, list change-----
	5652
	living conditions-----
	6595
	naval communication station, agreement-----
	16599
	naval matters, furnishing of certain supplies and services to naval vessels, agreement-----
	11329
	north and west coasts, sailing directions, change-----
	9257
	plant quarantine import requirements-----
	5803
	radioactivity sampling of upper atmosphere by means of balloons, agreement-----
	7439
	south coast, sailing directions-----
	16451
	space vehicle tracking stations program, agreement-----
	11310
	status of U.S. forces, agreement and protocol-----
	14729
	Austria:
	anti-dumping legislation-----
	8416
	automatic vending machines, U.S. export market-----
	16870
	economic cooperation agreement, ERP counterpart settlement-----
	3343
	economy, basic data-----
	2426
	educational commission and financing exchange programs, agreement-----
	16608
	establishing business-----
	12256
	feed grain diversions, investigate, hearing-----
	17157

# INDEX 1963

Entry	Entry
Austria—Continued	Automation—Continued
gas appliances, household and commercial, U.S. market in.....	cybernetics, nature of work, East German study.....
return of property, rights, and interests, agreement.....	dairy plants, layouts and operating criteria for processing milk and half-and-half, etc.....
Austrian-American Educational Commission, establishment, agreement.....	data processing, glossary.....
Auterman, James L., fading correlation bandwidth and short-term frequency stability measurements on high-frequency transauroral path.....	data processing of range vegetation information.....
Authors:	driving systems for farm machinery, study by simulation, USSR study.....
examination announcement.....	economic perspective (address).....
L. C. national union catalog, cumulative list.....	effect on education for responsible citizenship (address).....
North Korea, scientific publications.....	electric, structural methods in theory, USSR study.....
Slovak writers conference, Apr. 22, 1962.....	engineering cybernetics, USSR study.....
USSR, struggle against stubborn writers.....	feature characteristics and 6th feedback loop, USSR study.....
young writers, all-Union conference, USSR.....	finite automata behavior, USSR study.....
Autoclaves, production of rhenium powder, USSR experiment.....	fish industry, mechanization and automation, urgent task, USSR study.....
Autocorrelation of rainfall and streamflow minimums.....	full use to increase productivity (excerpts from remarks).....
Auto-instructional devices, see Teaching machines.	Implications for counseling.....
Automata are parasites and hard workers, USSR.....	Internal Revenue Service change-over, manpower implications.....
Automatic control of nonstationary parameters and parametric fields, USSR.....	learning and logical processes in automatic equipment, East German study.....
Automatic data processing equipment, see Electronic data processing systems.	major reserve for improving industrial management, USSR study.....
Automatic film density reading system.....	office, impact in Internal Revenue Service.....
Automatic light aircraft readiness monitor:	office, in Federal Government.....
applications to Army aircraft.....	pneumatic-hydraulic, USSR seminar on automation.....
phase 2 test program.....	problems of certain functional systems, USSR study.....
Automatic machinery:	production and deterioration of health of workers in capitalist countries, USSR study.....
device for starting recording rain gauge when rainfall begins.....	production processes by means of computer equipment, USSR study.....
vending machine industry, growth and development.....	pulp and paper industry, impact—department edition.....
Automatic pallet-box filler for apples.....	document edition.....
Automation:	summaries of studies, 1947-60.....
abstracts pertaining to Communist China in Soviet journals.....	redundant automatic systems, USSR study.....
automata and events, USSR study.....	relay devices and finite automata, symposium, USSR.....
automata with programmed control, optimal operating conditions, USSR study.....	reliability, efficiency, USSR study.....
automatism in living nature and plant humidity from standpoint of cybernetics, USSR study.....	research sponsored by Office of Manpower, Automation and Training.....
bi-directional computer updating equipment (CUE), test and evaluation.....	self-learning systems, principles of design, USSR study.....
blast furnaces processes by means of computers, USSR study.....	small office, bibliography.....
business education, implications (paper).....	spacecraft of United States.....
calculations and development of computer engineering, USSR study.....	steamflow records computation, effects, etc.....
commercial banks.....	systems, classification according to control principles, USSR study.....
Commission of Rumanian Academy, scientific session.....	systems, control operations and objective actions, comparative analysis, USSR study.....
continuous furnaces, USSR study.....	USSR—
control systems calculating entropy of output processes with use of amplitude characteristics, USSR study.....	controlling mathematical machine
cybernetics and automatic control, USSR studies.....	Stal 1 for laying out without waste.....
cybernetics and control theory, USSR study.....	developments.....
	long-range prospects.....
	machine building industry.....
	translations from Avtomatika.....
	vending machines and their changing fortunes, USSR report.....

	Entry
Automation—Continued	
vocational education act of 1963, report	15270
work force adjustments to change, employer procedures	6353
Automation (USSR periodical): translations	6771
Automation and telemechanics (USSR periodical): translations	6840
Automatons, finite automaton and partner using mixed strategy in games, theory and solution, USSR study	12333
Automats, life, and consciousness, USSR	12321
Automobile drivers:	
driver, defensive driving	7478
National Driver Register Service	20118
Automobile seat belts:	
passenger type, installation, Federal standard, amdt.	15511
sold or shipped in interstate commerce, meet safety standards, reports	11839, 13586
Automobile-service-station attendants, see Service-station attendants.	
Automobiles:	
benefits for disabled veterans of cold war, authorize grant, report	11962
consumer buying intentions, quarterly reports	6003, 11635
cotton and other materials purchased for interiors	16748
disabled veterans, liberalize provisions, hearing	8126
District of Columbia dealers, administration and enforcement of regulations, report	2037
exhausts, development of depleted-uranium catalysts for destruction of air pollutants	4490
industry, outlook for 1963 and review of 1962	4548
materials used in 1961 interiors and convertible tops	3369
Soviet price list	15804
USSR industrial development, translations	690, 6748, 2806, 8744, 10657, 12737, 14221, 14389, 15669, 15749, 19480
Moskvich, compact car, history	14314
Ulyanovsk plant, new vehicle series	15826
Automotive transportation, see Motor vehicles.	
Automotive vehicles, see Motor vehicles.	
Autonomic control of circulation during hibernating cycle in ground squirrels	13204
Autopilots, see Aircraft automatic pilots.	
Autoprecession:	
propeller-power-plant boundaries for 4-engine turboprop transport airplane	16381
propeller whirl-flutter speeds and static-stability derivations	18142
Autoradiography, see Radiography.	
Autoxidation, see Oxidation.	
Auzis, Kaino H., relief	8031, 13484
Avalanches:	
control in starting zone, guidelines for planning and design of permanent supporting structures	4990
mud and rock slide on experimental watershed, case history	12180
Avco Corporation, Falcon missile components, purchased by Hughes Aircraft Co., excessive costs included in prices, GAO report	20714

	Entry
Avery, Ivan F.:	
carbon black	18066
natural gas	1227, 20963
Aviation, see Aeronautics—Aircraft.	
Aviation boatswain's mates:	
E 3 & 2, Navy training course	7357
F 1 & C, Navy training course	19991
Aviation Crash Injury Research, Flight Safety Foundation, Inc., final report, Sept. 16, 1961—Dec. 15, 1962	20204
Aviation fields:	
arctic earth science investigations, northeast Greenland, 1960	1749
military, construction, basic principles	5919
pavements—	
rigid and overlay, engineering and design manual	4862
rigid, prestressed, small scale model studies	13880
planning, site selection, and design in theater of operations, technical manual	20328
prefabricated surfacing membrane investigation	2228
snow stabilization for roads and runways	19135
Aviation fuels, see Gasoline—Motor fuel—Turbine fuel.	
Aviation machinists:	
mate J 1 & C, Navy training course	11143
mate R 1 & C	19992
Aviation Medical Service:	
aircraft accident notification procedures, etc.	10102
civil aeromedical research, responsibilities, aims, and accomplishments	4505
Aviation medicine, see Medicine.	
Aviation ordnanceman, Navy training course	9263
Aviation Organization, International Civil, see International Civil Aviation Organization.	
Aviation storekeeper, 1 & C, Navy training course	7358
Aviation structural mechanics, see Mechanics (persons).	
Aviators:	
airplane pilot, examination announcement, discontinuance notice	4622
commercial pilot, single-engine airplane, flight-test guide	2302
electronics fundamentals for aircraft navigators, Air Force manual, change	5866
hearing of Air Force pilots, 1955-62	4417
memorandum for aviators	3894
multiengine airplane, class or type rating, flight test guide	17465
pilot training, acceptable representation of airplane dynamic responses in simulators	7367
pilots—	
and flight instructors, certification, Federal aviation regulations, amendments	478, 10112-113
determining time-invariant and time-variant dynamic characteristics	11078
measured variation in transfer function in single-axis tasks	20986
measuring human transfer functions	11059
private pilot, flight training guide	13978
private pilot, single-engine airplane, flight test guide	12141
spatial disorientation, current concepts and aeromedical implications	20309

# INDEX 1963

	Entry
Aviators—Continued	
stress responses of pilots.....	4413
survival sense, Army pamphlet.....	18547
weather services for pilots.....	1594
see also Notice to aviators.	
Avocados:	
Florida—	
fruit weights and corresponding diameters.....	18381
marketing, economic aspects.....	14869
production, use, value, 1961-62.....	18340
Avtomatika i telemekhanika (periodical):	
translations.....	6840
Avtomatika (periodical):	
translations.....	6771, 12608
Awards (arbitration):	
National Railroad Adjustment Board.....	1356-58, 3190, 7340, 9248, 11126, 14612, 16444, 18211, 19980-982
Awards (incentive), see Rewards (prizes, etc.).	
Awramik, J., Jr., submarine-rescue radio buoy, electrical, etc., design.....	11170
AWTR, see Advanced waste treatment research (series).	
Ax, Paul, exploration of space.....	11510
Axial flow, see Flow.	
Ayers, Louis R., public schools systems, directory.....	13843
Ayres, George S.:	
basic data on economy of Afghanistan.....	2420
economic developments in Pakistan, 1962.....	8390
establishing business in Pakistan.....	2418
investment in Iran.....	6597
Pakistan's licensing and exchange controls.....	2387
Ayrshire cattle, see Cattle.	
Ayrazian, Arthur M., plastic tools as manufacturing aids.....	11198
Azerbaijdzhan medical journal (USSR periodical).....	3004
Azerbaijdzhan Soviet Socialist Republic, drilling problems of super-deep well for study of earth's crust.....	12354
Azerbaijdzhanskiy meditsinskiy zhurnal (periodical):	
translations.....	3004
Azimuth, geodetic long-line, solutions by photogrammetric techniques.....	16769
Azotobacter, encysting cells, inactivation by ionizing radiation.....	16793
Azov, Sea of, lights and fog signals, list.....	11140
Azovskoye More, see Azov, Sea of.	
Aztec Ruins National Monument, general information.....	7333, 12919
Azucena de San José, Mother, see Auguilar, Carmen H.	

## B

B.D.S.A., see Business and Defense Administration.	
B.L.M., see Land Management Bureau.	
B.R.L., see Ballistic Research Laboratories.	
Babcock, C. D., buckling stress of cylindrical shells, effect of initial imperfections.....	16410
Babcock, Clarence O.:	
sulfur and pyrites.....	19880
sulfur in 1962.....	5503, 18108
Babies, see Infants.	
Babitskin, J., transverse magnetoresistance of aluminum.....	18254

	Entry
Babitzke, H. R., columbium-hafnium binary alloys for elevated-temperature service.....	1240
Baboons:	
isolation of enteroviruses.....	5892
kidney cells, susceptibility to human enteroviruses.....	1775
Background on U.S. agriculture.....	16745
Backpacking in national forest wilderness, a family adventure.....	16753
Bacteria and bacteriology:	
bacteria contaminated blood, hemotransfusion reactions and complications caused by transfusion, prophylaxis and therapy, USSR study.....	10854
bacteria concentration in water, effect on reproduction of water fleas, USSR study.....	12720
bacterial synergism, studies with simulated Martian environment.....	7638
clinical bacteriology, laboratory procedures, Army technical manual.....	13243
clinical laboratory procedures, bacteriology.....	9267
cultures, saprophytic, USSR research.....	14085
decane oxidizing bacteria isolated from depth waters of northern Cascaus, USSR study.....	17700
fluorescence and phase-contrast bacterioscopic diagnosis of tuberculosis, effectiveness, USSR study.....	12520
frozen precooked food industry survey.....	2304
halophile sulfate-reducing bacteria, effect of freshening strata waters, USSR study.....	10383
heterotrophic, distribution in some seas of Mediterranean basin, USSR translation.....	17735
hydrocarbon-oxidizing bacteria research, East German study.....	8459
Influence of cold on host-parasite interactions.....	18489
Intestinal flora of ground squirrels, changes during hibernation.....	11500
Intestinal microflora, biocenosis, effect on development of radiation sickness, USSR study.....	2967
marine microflora, sampling method used for study, problems, USSR.....	20881
Martian simulated environment, survival.....	83
processing preparations with fluorescent antibodies, USSR study.....	12494
proliferating cultures of blue-green algae anabaena variabilis and amorphonostoc punctiforme, USSR study.....	12376
resistance of mice to bacterial disease, effect of low ambient temperatures.....	1755
saprophytic microflora, adaptation of individual species to gaseous hydrocarbon oxidation, USSR study.....	17701
silver in low concentrations, bacteriological and chemical behavior.....	16522
specific brightness of bacteria stained with fluorescent antibodies, criteria, USSR study.....	17689
throat cultures, detection of group A streptococci by immunofluorescence.....	12987
see also Myxobacteria—also names and classes of bacteria.	
Bacterial leaching of manganese ores.....	1241

# JANUARY-DECEMBER

	Entry
Bactericides, silver behavior in low concentrations	16522
Bacteriogenic formations of iron-manganese concretions in Indian Ocean, USSR	15799
Bacteriologists, examination announcement	9743
Bacteriology, <i>see</i> Bacteria and bacteriology.	
Bader, Henri, physics and mechanics of snow as material	2190
Badger, Kenneth T., impact of technological change on marketing costs and grower's returns, potatoes, etc.	1706
Baffin Bay, sailing directions, change	11138
Bagby, Robert H., relief	17097
Baggage:	
Armed Forces members, advance return, report	13540
luggage, briefcases, and personal leather goods, current industrial reports	3574
Bahrain, labor conditions	18051
Baler, L. A., resistance of barge tows, supplement	15455
Balg, Mirza T.:	
basic data on economy of Singapore	8383
living conditions in Singapore	8382
Balkal, Lake, biological sequela of level variations, USSR study	8742
Balley, John M., lawn and garden services in eastern farmer co-ops	6379
Bailey County, Tex., soil survey report	13057
Ballie, Ann E., analytic representation of Mosen's theory of artificial satellites in terms of orbital true longitude	3133
Baird, Spencer F., correspondence with Louis Agassiz	14691
Bait, fish, collection, care, preparation and propagation	548
Baker, Albert F., calcined anthracite in foundry cupolas	16339
Baker, Dorothy C., mineral trade notes, monthly inventory	3902
Baker, Ernest T., Jr., ground-water geology of Grayson County, Tex.	10300
Baker, Eva, relief	13472, 16998, 17219
Baker, J. B. E., effects of drugs on foetus	1923
Baker, John A.:	
addresses, etc.—	
Jan. 30, 1963	5835
May 21, 1963	14894
May 23, 1963	14890
June 17, 1963	14888
Aug. 5, 1963	18443
Sept. 24, 1963	20283
Baker, P. S., isotopes and radiation technology, review of recent developments	20332
Bakers and bakeries, sweeteners used by baking industry	13837
Bakersfield, Calif., Meadows Field, weather observations, hourly, decennial census	9493
Bakery products, homemade and commercial forms, consumer quality, preparation time, and yield, etc.	14860
Baking, <i>see</i> Cookery.	
Balaban, Harold S., system reliability allocation, development of procedures, etc.	11471

	Entry
Balance of payments:	
achieving twin goals of external balance and more rapid domestic growth (remarks)	20216
and discriminatory ocean freight rates, hearings	17054, 20447
balancing our international accounts (remarks)	18355
deficits, special message from the President	13465
financial policies and balance of payments (remarks)	13105
financing U.S. payments deficit	10180
interest equalization tax on foreign securities, impose—	
hearings	18962
President's special message	15336
statement	21148
maritime industry's role in improving situation (remarks)	11361
monetary policy, effect of recent changes on problems, hearings	17166
statistical supplement, 1870-1961	4559
tax program and balance of payments (remarks)	14760, 20217
tax program in direct relationship (remarks)	7494
United States—	
and Common Market (remarks), current problems and policies, hearings	17055
factors affecting, studies	1972
our unfinished task of improving (remarks)	7495
outlook, hearings	1973
outlook, statements by economists, bankers and others	20450
policies consistent with domestic objectives of maximum employment and growth, report	1975
Balance sheets, <i>see</i> Finance.	
Bald eagle, <i>see</i> Eagles.	
Balderston, C. Canby, remarks, June 13, 1963	12122
Baldone, Latvian SSR, health resort guide	8557
Baldwin, Alan W., quickening terms for improved binary angle of attack display, method for establishment	11154
Baldwin, Barrett S., Jr., propagation of plane acoustic waves in radiating gas	12889
Baldwin, Howard A., telemetry devices for dental research	16798
Baldwin, J. L., weekly weather and crop bulletin, national summary	4302
Balke, Bruno, simple field test for assessment of physical fitness	16867
Ball bearings, <i>see</i> Bearings (machinery).	
Ballasts (electric):	
lamp, fluorescent, current industrial reports	5995
Ballinger, Roy A.:	
sweeteners used by—	
baking industry	13837
beverage industry	10049
confectionery industry, etc.	12043
dairy industry	10048
food processing industries in United States	351
Ballistic missiles, <i>see</i> Missiles.	
Ballistic Research Laboratories, technical notes	9311
Ballistics:	
armament elements, AMC engineering handbook	20322
atmospheric, in rocket technology	14567
computers, excessive material costs, under Air Force Dept. contract with Servomechanisms, Inc., GAO report	15593



# INDEX 1963

Entry	Entry
Ballistics—Continued	
lunar surface, and hazards associated with spacecraft landing, etc.	7250
Ballistocardiography:	
practical, fundamentals, USSR study	10668
significance in investigation of mitral lesions of heart, USSR study	2968
Balloons:	
equatorial flights, agreement with India	3352
joint Indo-United States flight program, 1961	13197
moored, Federal aviation regulations	13900
parachute descent times and impact locations for high altitude payloads	18455
radar tracking, measuring detail	11022
wind data	7439
sampling radioactivity of upper atmosphere, agreement with Australia	16054
Soviet use in atomic materials testing	59
superstructure, for constant level flight	20981
wind sensors, dynamic response of rising and falling with application to estimates of wind loads on launch vehicles	11781
Ballou, Doyle A., relief	9621
Ballou, Eleanor F., reference books	7353, 19990
Baltic Sea:	7347, 21049
lights and fog signals, Hist.	
Baltimore, Md.:	
consumer expenditures and income, 1960—	
advance report	7160
supplement	12786
consumer practices in handling and storing frozen foods, etc.	16742
electric facilities of area, map	516
income, education, and unemployment in neighborhoods	9066
metropolitan area, hurricane survey, engineer report—	
departmental edition	4836
document edition	4691
occupational wage survey—	
departmental edition	7164
document edition	6075
principal electric facilities, map	2266
Baltimore and Ohio RR., accident	640
Baltimore Gas & Electric Co.:	
right-of-way purchase from District Training School, authorize—	
law	20396
report	13739
Baltzo, C. Howard, living and working conditions on Pribilof Islands, Alaska	13964
Bamboo mongoose trap	19245
Band-pass filters, low frequency narrow band pass active filter for in-flight measurement of blood pressure	11483
Bandages and bandaging, anesthesia for painful changes of dressings, USSR study	18011
Bandeen, W. R., radiation view of hurricane Anna from Tiros meteorological satellite	9177
Bandelier National Monument, general information	12920
Bang, Chang Kyu, see Williams, Henry B.	
Bangs, William F., sinusoidal vibration testing of nonlinear spacecraft structures	19910
Bangs disease, see Brucellosis.	
Banister, D'Arcy, rock drilling at Silver Summit Mine	10937
Banking, see Banks and banking.	
Banking and Currency Committee, House:	
calendar	3831
hearings	7987-90,
0925, 0927, 11887, 13643-044, 15303-305, 17164-166, 18930, 20496.	
investigations and studies—	
authorization, report	4738
expenses, reports	6123, 6138
housing—	
authorization, report	4737
expenses, report	18881
travel authorization, report	7961
meetings with department and agency officials and trade organizations, hearings	7988
reports	6165,
7944, 7964, 9889, 11815, 11847, 15271, 15284-286, 17103-104, 17149, 18847-851.	
subcommittee print	9926
Banking and Currency Committee, Senate:	
calendar	3850
committee prints	8094-95, 13795
50th anniversary, 63d Congress, 1913, to 88th Congress, 1963—	9957
hearings	327,
6290, 8093, 10000-3, 12007-8, 13793-794, 15377, 19045.	
history, 1913-63, print as Senate document, report	6284
investigations and studies—	
authorizing expenditures, reports	6231, 6241
housing, public and private, expenses, reports	6233, 6242
reports	6231,
6233, 8049, 9978, 9990, 11993, 13700, 13727-728, 13741, 13751, 15352, 17285, 17300, 19011, 19024, 20597, 20602.	
Banking Commission, see Federal Banking Commission.	
Bankruptcy:	
act, amend, reports	6176,
7924, 9964, 20593	
act, amend in regard to reexamining attorney fees, law	11709
act, amend rel. to statutory liens and powers of trustee, report	13576
act, amend to facilitate deposit of funds in interest-bearing accounts—	
law	11708
reports	6177, 9967
taxes, limiting priority and non-dischargeability, report	11833
Banks and banking:	
active banks in District of Columbia, national and nonnational, abstract of reports	4657, 7816
applications to merge banks or to form or expand bank holding company	3459
assets and liabilities, all banks, semimonthly report	3469, 19201
assets and liabilities, and capital accounts, commercial and mutual savings	490, 12102
automation at commercial banks	525
bank and PCA lending to farmers	19202
bank credit and money, 1962	6438
bank debits and deposit turnover	3475
bank holding companies, scope of operations and stock ownership	9926
bank rates on short-term business loans	19203
bank savings surge, rose with thorns (remarks)	12122

	Entry
<b>Banks and banking—Continued</b>	
bank-SBA participation loan plans, guide	7425
banking and monetary statistics, 1962	12119
banking structure changes, 1953-62	19204
banks and community progress (remarks)	6059
banks and monetary system	2275
chain banking, stockholder and loan links of 200 largest member banks	2062
code of Federal regulations	10165
combined financial statements—member savings and loan associations, 1962, advance highlights	15484
members of Federal Home Loan Bank System, assets and liabilities	20664
consolidated condition statement—consumer installment credit, monthly report	3469
debts to demand deposit accounts, etc., 1962	3547
deposits—country banks	6436
distribution by counties and metropolitan areas	3598
examiner looks at agricultural lending	2269
Federal and State banking laws, conflict of rulings and interpretations, hearings	15503
Federal banking laws and reports, 1780-1912, compilation	17165
Federal deposit insurance act, amend, hearings	8094
Federal reserve par list	15304
cumulative supplements	20678
foreign countries, economic policies and practices of central banks, materials	3673
foreign operations under Federal reserve act, regulations	18791
Government policy, report of Committee on Financial Institutions	19208
insured banks—deposit insurance, increase maximum coverage for each depositor, hearings	10028
offices insured by FDIC, list	15304
report	3871, 6401
interbank relations, equalize opportunities (remarks)	17429
interest rates on time deposits, mid-February 1969	10182
loans, participation with SBA, handbook	13935
monetary statistics, 1962	21104
monetary statistics, supplements	8257
mutual deposit guarantee corporations, tax exemption, report	2275-78, 6439
national banking review	13580
nonmember banks that maintain clearing accounts with Federal reserve banks	20393
reform in banking (remarks)	4206, 4927
role of deposit insurance	2279
savings accounts—individual investments, 1962	4658
investments of individuals, quarterly	12103
savings and loan industry in Heller report (address)	3807
USSR, Foreign Trade Bank, establishment	10150
	8836

	Entry
<b>Banks and banking—Continued</b>	
<i>see also</i> Federal home loan banks—Federal reserve banks—Federal reserve member banks—Federal reserve system—National banks—State banks—also headings beginning Federal reserve—also names of banks or places where located.	
Banning, L. H., metallurgical investigations of Philippine nickeliferous ores	3072
Bannock thrust zone, southeastern Idaho	8336
Baptists, religious teachings, Soviet criticism	17678
Baradell, Donald L., lateral range control by banking during initial phases of supercircular re-entries	1303
Baranof Island, Alaska, northern, reconnaissance geology	10284
Barany, Ronald: heat of formation of gehlenite and talc	14516
heats and free energies of formation of calcium tungstate, etc.	3098
Barbados, meteorological research projects agreement	9426
Barber, A. W., radio astronomy	9605
Barber, Richard J., Government patent policies	15402
Barber, Robison H., import tariff system of Egypt (U.A.R.)	2390
Barbers, nursing homes, services for residents	13016
Barbiere, Robert E., techniques of physiological monitoring, fundamentals	20301
Barbiturates, as addicting drugs	19959
Barboursville, W. Va.: Guyandot River bank protection project, authorize construction—law	17051
report	17254
Bare Lake, zooplankton, composition, abundance, and depth distribution after fertilization	6465
Barendsen, Robert D., Research Section in Japanese Ministry of Education	10079
Barger, W. R., vacuum precooling, comparison of cooling of different vegetables	9582
Barges: lights and fog signals in special vessel anchorage areas, amend rules—bearing	13798
law	17014
reports	11829, 11965
tows, channel effects on resistance, supplement	15455
Barghausen, A. F., tropospheric communication circuits	3176
Barite: flotation concentration of complex barite-fluorspar ore	10948
infrared studies of oleic acid adsorption	9130
minerals yearbook chapter	18064
selective flotation of barite-fluorspar ores from Kentucky	9120
Barium disilicic fluorimica, <i>see</i> Fluorimicas.	
Barium oxide heats and free energies of formation	5497
Bark, characteristics and fire resistance, literature survey	12195
Barker, F. B., determination of beta activity in water	8357
Barker, Margaret, relief	13470, 16996, 17217

# INDEX 1963

	Entry		Entry
Barley, evolutionary aspects of certain morphologic characters in World Collection.....	7583	Bartlett, James D., basic data on economy of Sierra Leone.....	2423
Barmalds, workers, coverage under Fair labor standards act, extend investigation, hearings.....	7994	Bartlett, Margaret P., relief.....	7907
Barnes, Burton V.: cultural treatments stimulate growth of western white pine seedlings.....	17479	Bartlett, Richard P., Jr., peanut moisture meter study, 1962-63.....	18378
flower induction, etc., in western white pine.....	13989	Bartley, Robert T., address Dec. 12, 1962.....	2256
insect-caused loss to western white pine cones.....	572	Barton, F. W., brittle fracture initiation in mild steel.....	20124
juvenile performance of hybrids between western and eastern white pine.....	10214	Barton, Manes: fall water supply summary for Nevada, 1963.....	21115
Barnes, Frank, Fort Sumter National Monument.....	5638	summary of snow measurements for Nevada, California, Oregon.....	1502
Barnett, Paul W.: experimental winter flying glove.....	11505	water supply outlook and snow surveys for Nevada.....	4288
field tests of 2 anti-exposure assemblies.....	1752	Barton, William R., columbium and tantalum, materials survey.....	3054
Barns: dairy barn fallout shelter, farm building plan.....	20288	Bartow County, Ga., ground-water geology.....	19326
3-stall milking plant for 20-40 cows, farm building plan.....	14879	Basaltic rocks, <i>see</i> Rocks.....	
Baroch, C. J.: AEC fuel cycle program, design and fabrication of basic fuel assemblies.....	16835	Basin quadrangle, Mont., geology.....	20729
failed hot gas isostatic pressed fuel rods.....	16842	Baskets, Alaska Tlingit spruce root basketry.....	15632
fuel rods containing low temperature sintered pellets.....	16847	Baskey, R. H., fuel bearing fiberglass in aluminum-base fuel elements.....	4492
Barometric pressure, <i>see</i> Atmospheric pressure.....		Bass, N. Wood, geology of Glenwood Springs quadrangle and vicinity of northwestern Colorado.....	17524
Baron, Frank J.: California cone crop— 1962.....	6499	BAT, <i>see</i> Apprenticeship and Training Bureau.....	
1963.....	19263	Bates, Robert G., aeroradioactivity survey and areal geology of Oak Ridge National Laboratory area.....	1827
effects of different grasses on ponderosa pine seedling establishment.....	10227	Bath County, Ky., soil survey report.....	21116
seed origin and size of ponderosa pine planting stock grown at several California nurseries.....	15574	Bathymograph, depth-time recorder.....	6469
Barone, S. R., resonances for Fabry-Perot laser.....	7605	Baton Rouge, La., Ryan Airport, weather observations, hourly, summary, decennial census.....	20236
Barr, Joseph W., remarks, July 18, 1963.....	14760	Batt, William L., Jr.: remarks— Oct. 7, 1963.....	18532
Barracks and quarters, troop housing, Yards and Docks Bureau design manual, change.....	1605	Oct. 19, 1963.....	18531
Barrels, steel shipping, current industrial reports.....	3574, 11629	Batteries, <i>see</i> Electric batteries— Storage batteries.....	
Barrett, Ashton C.: nomination— hearings.....	15378	Battle Mountain Indian Colony, lands for cemetery purposes, place in trust status, report.....	20577
report.....	18970	Battle of Lake Erie, <i>see</i> Lake Erie, Battle of.....	
remarks— Dec. 22, 1962.....	2262	Battle of Lake Erie Sesquicentennial Celebration Commission, establish, reports.....	15368, 18901
Oct. 25, 1963.....	19190	Battlefields, <i>see</i> names of battles or battlefields—also names of certain national parks, etc.....	
Barrett, James M., N.S. Savannah safety assessment.....	18596	Battles, <i>see</i> names of battles, or places where fought.....	
Barrett, Robert E., predicting localized vibratory environments of rocket vehicles.....	19912	Bauer, Donald J., yttrium behavior in rare-earth-amine extraction systems and effect of sequestrants.....	12838
Barrier equipment, <i>see</i> Arresting gear.....		Bauer, Frederick L.: Industry wage survey— bituminous coal mining.....	19794
Bars (metal, etc.): Federal item identification guides for supply cataloging, supplements.....	3655	electric and gas utilities, July 1962.....	19793
Barten, Johanna T.: employee-retirement systems of State and local governments.....	18642	flour and other grain mill products, Nov. 1961.....	1168
State payments to local governments.....	20342	Bauer, Helmut F., effect of propellant sloshing on stability of accelerometer controlled rigid space vehicle.....	20982
State reports on State and local government finances.....	16878	Bauer, Josephine, introductory social studies, exercise book.....	12035
fair labor standards act, extend investigation, hearings.....	7994		

# JANUARY-DECEMBER

Entry	Entry
Bauer, S. J., thickness of helium ion layer -----	7286
Baum, Samuel, hired farm working force of 1961 -----	12042, 20624
Baumgartner, D. J., water supply and waste disposal problems at remote Air Force sites in Alaska -----	13207
Bauxite:	
ferruginous, extraction of alumina by double-leach process -----	18098
minerals yearbook chapter -----	19823
report, quarterly -----	3477
Bay Kow Jung, <i>see</i> Jung, Bay Kow.	
Bayley, Richard W., Precambrian iron deposits near Atlantic City, Wyo -----	10285
Bayou Bodcau Dam and Reservoir project, general information -----	15454
Bayous, <i>see</i> names of bayous.	
Bayroff, A. G.:	
development of literacy screening scales for AFQT 7 and 8 -----	14949
failures -----	4464
enlisted input, improving -----	16831
screening devices for selective service registrants who fail AFT 7 and 8 -----	16831
Bays, <i>see</i> names of bays.	
Bazelon, David L., President's panel on Mental Retardation, report of task force on law -----	21075
BDSA, <i>see</i> Business and Defense Services Administration.	
BDSA export potential study (series) -----	16870
Beach, Norman E.:	
directory in plastics, knowledgeable Government personnel -----	17352
Government specifications and standards for plastics covering defense engineering materials and applications -----	15409
reduction of reflectivity from transparent materials, techniques applicable to plastic helicopter canopies -----	2118
reinforced plastics, defense specifications and standards -----	10044
Beach erosion, <i>see</i> names of localities.	
Beach Erosion Board:	
abolish, reports -----	13708, 18905
bulletin -----	6356
miscellaneous paper -----	6357
technical memorandums -----	6358-60, 19130-132
Beachem, C. D., electron fractographic study of mechanisms of ductile rupture in metals -----	11186
Beaches:	
profile as affected by vertical walls -----	19131
radioactivity, relationship to watershed geology -----	19132
sand -----	
Bristol Bay, Alaska, reconnaissance -----	10949
equilibrium characteristics in offshore zone, errata -----	6358
Beacons, radar airborne, catalog prices, GAO examination -----	12200
<i>see also</i> Lights and lighting.	
Beale, Calvin L., recent population trends in United States, etc. -----	4803
Beams:	
behavior of beam-columns in inelastic range -----	9637
uniform rectangular-cross-section free-free sandwich natural frequencies, analytical and experimental investigation -----	20989
<i>see also</i> Electron beams.	
Beans:	
dry -----	
foreign agriculture circulars -----	3720
foreign trade prospects -----	10208
snap, marketing costs and grower's returns, impact of technological change -----	1706
<i>see also</i> Soybeans.	
Bear Creek Dam:	
change name to Francis E. Walter Dam -----	
law -----	13430
report -----	13709
Bear River Refuge, birds -----	15529
Bear River Valley:	
ground water, availability -----	8343
water supply outlook and snow surveys of basin -----	4290
Bearings (machinery):	
aeronautical antifriction, maintenance handbook -----	21059
air, types for simulating frictionless environments, design, errata -----	7243
aircraft engine, uneconomical procurement by Navy Department, GAO review -----	5009
antifriction bearing industry, outlook for 1963 and review of 1962 -----	5979
ball bearings at high speed, minimum-oil-flow requirements at temperatures to 800° F. -----	20993
boundary lubrication characteristics of bearing steel in liquid oxygen -----	5589
Federal item identification guides for supply cataloging, supplements -----	3652
sliding, for friction in chemical machine construction, investigation of non-metallic materials -----	20315
Beasley, Gary P., pilot-controlled simulation of rendezvous between spacecraft and commanded module having low thrust -----	7270
Beasley, W. D., direct velocity measurements in low-density plasma flows -----	11060
Beaumont, Tex.:	
occupational wage survey -----	
departmental edition -----	16278
document edition -----	15169
Beauty shops, nursing homes, services for residents -----	13016
Beaver Creek:	
flood control, engineer report -----	
departmental edition -----	19153
document edition -----	18965
Waurika Dam, hearings -----	13667
Beck, Clifford K., remarks, Sept. 25, 1963 -----	18605
Beck, Donald E., yellow-poplar site index curves -----	6520
Beck, George T.:	
basic data on economy of Ceylon -----	10337
investment factors in India -----	6590
Beck, Paul H., relief -----	13511
Beck, William A., mineral industry of North Carolina -----	20961
Becker, Herbert, measurement of torsional rigidity of stiffened plates -----	16411
Becker, Norwin H.:	
cytochemistry of anoxic and anoxic-ischemic encephalopathy in rats, etc. -----	7195
diphtheritis encephalitis in rats, cytochemical study of Golgi apparatus -----	7193
effect of oxygen-rich atmospheres on cerebral lipid peroxides -----	9106
Beckman, Norman, address, July 8, 1962 -----	11423

# INDEX 1963

	Entry		Entry
Beecraft, George E., geology, etc., Turtle Lake quadrangle, Wash	12222	Belgium—Continued	
Bed springs, <i>see</i> Bedsprings.		communications facilities, agreement	13090
Bedding:		economic developments, 1962	8412
current industrial reports	4583	establishing business	17557
products and components, recommendation of trade	4555	gas appliances, household and commercial, U.S. market	7737
Beds:		gazetteer, geographical names	17518
estimating needs in progressive patient care hospital	7403	Germany boundary, study	20152
recommendation of trade	4555	import tariff system	6604
<i>see also</i> Bedsprings.		market for U.S. products, international commerce, supply	10327
Bedsprings:		marking and labeling requirements, mutual defense assistance, administrative expenses	2433
current industrial reports	3574, 13293	ornamental plant explorations	7741
recommendation of trade	4555	plant quarantine import requirements	11432
Bedsteads, recommendation of trade	4555	steel wire rods, determination of no injury or likelihood thereof to U.S. industry	9550
Beech:		trade mission to, 1963	13094
bark disease	4981	Belgorod, Russian SFSR, nature in Belgorodskaya oblast, USSR study	17563
preservative treatment	20693	Belgrade, Yugoslavia, liberation, Oct. 1944	754
Beef cattle, <i>see</i> Cattle.		Belin, G. d'Andelot, remarks, Sept. 24, 1963	8859
Fees:		Bell, Barbara:	20215
boney, orientation in space, physiological mechanism, USSR study	995	solar radio bursts—	
scale for weighing beehives	5792	spectral types 2 and 4, their relations to optical phenomena and to geomagnetic activity	9386
Beet leafhoppers, control in southern Idaho by seeding breeding areas to range grass	9540	type IV, geomagnetic storms, and polar cap absorption (PCA) events	20132
Beetem, W. A., use of cesium-137 in determination of cation exchange capacity	599	Bell, David E.:	
Beetles:		foreign aid program today, answers to 4 basic questions	19360
California stored grain, illustrated key to species	7550	nomination, hearing	4776
genus <i>Onthophagus</i> in America north of Mexico nomenclatorial history	3183	Bell, Edwin A., progress report on ground-water resources of Louisville area, Ky., 1949-55	15616
Japanese—		Bell, Kenneth G., uranium in carbonate rocks	17529
control	9569	Bell Aerosystems Co., award of X-22 (VTOL) contract, hearings	15374
in United States	9562	Bellow, Paul, lecture, Jan. 21, 1963	16303
life history and control	7551	Bells, ring on July 4, reports	11978, 13577
sugarcane, controlling on corn in Southern States	9575	Belmont County, Ohio, geology and coal resources	19314
Begab, Michael J., speech, Sept. 22, 1960	18708	Beloit, Wis., population, special census	164
Behavior:		Belorussian Soviet Socialist Republic, health, translations	6941
animals, USSR studies	19451	Belser, Richard B., vacuum evaporated and cathode sputtered thin films, research reports	7646-47
Army personnel, correlates of disciplinary record in wide-range sample	4463	Belt Railway of Chicago, emergency board report	8190
children, influence of breast feeding on, study	15094	Belts, <i>see</i> Automobile seat belts.	
energetics, energy discharge resulting from induced frustration, individual differences	7196	Beltsville energy-saving kitchen, design 3	4356
human factors research, bibliography	18487	Beltz, Mrs. William E.:	
political behavior, list of current studies	21119	convey land in vicinity of Unalakleet, Alaska to—	9805
<i>see also</i> Group behavior.		law reports	6096, 8045
Behavioral Sciences Laboratory, bibliography of reports	18485	Beluga River coalfield, subbituminous deposit suitable for open-cut mining, Alaska	19857
Behm, Milton A.:		Belvoir, Fort, river basin planning seminar, May 27-31, 1963	20651
divergent ejectors	5529	Benches, hardwood, design	17478
variable 2-dimensional inlet designed for engine-inlet matching	5521	Bending-moment distribution of cambered-span wing systems having minimum induced drag	7248
Behnke, Fred W., infrared spectra and vibrational assignments for some organometallic compounds	7590	Bendl, Robert E., leaflet disseminator	7485
Behr, E. A., preservative treatment of beech	20693	Beneath tumult and shouting (address)	21037
Behrman, Jack N., address, Sept. 16, 1963	18746	Benedict, Manson, pressurized water reactors fuel cycle costs, effects of changing economic conditions	14990
Bekey, George A., sampled data models of human operator in control system	5848		
Belgium:			
atomic energy, cooperation for mutual defense purposes, agreement	1526		
hearing	1968		



	Entry		Entry
Beneficiaries:		Bergendahl, Max H., geology of north-	
old-age and survivors insurance—		ern part of Tenmile Range.....	19300
hospital coverage of aged, national		Berger, Martin J., transmission and	
survey.....	9304	reflection of electrons by aluminum	
impact of hospitalization costs on		foils.....	9217
aged, national survey.....	9302	Berger, R. S., laboratory techniques	
mother-child groups, relatives in		for rearing <i>Heliothis</i> species	
household, national survey.....	9303	on artificial medium.....	18391
national survey, highlight re-		Bergin, M. J., coal geology of Seitz	
ports.....	9302-4	quadrangle, Breathitt, Magoffin,	
Beneficiation of aluminum plant resi-		Morgan, and Wolfe Count-	
dues.....	10952	ties, Ky.....	598
Beneficiation of refractory clay.....	3097	Bering Sea:	
Benefit series services, unemployment		eastern—	
insurance.....	3478	open halibut fishing to Japanese,	
Bengal, Bay of, sailing directions,		hearing.....	8101
change.....	3205	survey of benthic invertebrate	
Benjamin, Jesse:		fauna.....	8279
occupational wage survey—		southeast, ichthyofauna distribu-	
Albany-Schenectady-Troy, N.Y.....	12800	tion, USSR study.....	16257
Baltimore, Md.....	7164	Berk, Abraham A., Mines Bureau	
Benline, Arthur J., panel presenta-		boiler-water service.....	10941
tion, Dec. 11, 1962.....	1414	Berkeley Springs, W. Va., climatic	
Bennett, A. H., thermal characteris-		summaries of resort areas.....	9489
tics of peaches as related to		Berkenkotter, Richard D., diamond-	
hydrocooling.....	18447	drill sample data from Cebolla	
Bennett, Edwin and Bruce, payment		Creek titaniferous iron de-	
of reward to.....	11778, 18988,	posit.....	14508
Bennett, Frank A., growth and yield		Berkofsky, Louis, lectures on numeri-	
of slash pine plantations.....	12191	cal weather prediction.....	1733
Bennett, Robert M., factors affecting		Berkowitz, Joan B., kinetics of oxida-	
flutter characteristics calcu-		tion in Mo-Si system.....	7589
lated for 2-swept wings by		Berkowitz, Joseph, initial failures of	
piston theory, etc.....	11067	precision instrument compo-	
Bensenville, Ill., population, special		nents.....	5659
census.....	6000	Berkowitz, Monroe, rehabilitating	
Benson, Carl S., stratigraphic studies		disabled worker, platform for ac-	
in snow and firn, etc.....	2188	tion.....	20224
Benson, Manuel A., factors influencing		Berlin, Germany:	
occurrence of floods in humid		Berlin in changing European set-	
region of diverse terrain.....	2355	ting, report.....	4774
Benson, Norman G., equilibrium yield		East—	
and management of cutthroat		press service news briefs.....	10367
trout in Yellowstone Lake.....	17462	sending gift packages to.....	2408
Benson, Willmar T., Pine Flat and		situation, USIA in action.....	11365
Diamond Flat nickel-bearing		West—	
laterite deposits, Del Norte		economic developments, 1962....	8396
County, Calif.....	9132	economic statistics, handbook....	3761
Benthos:		preparing shipments to.....	5072
distribution in Gulf of Tonkin and		what next in Berlin?.....	97
South China Sea, general charac-		Berlin, N.Y., motor vehicle accident—	
acteristics.....	12575	Berlin Youth Rally, Walter Ulbricht's	
invertebrate fauna of eastern Ber-		speech, East Germany, transla-	
ling Sea, survey.....	8279	tion.....	19695
Benton Harbor Canal:		Bermuda, space vehicles, tracking	
nonnavigable stream—		stations program, agreement.....	21135
hearing.....	13657	Bernardo, Anthony F., relief.....	11780
law.....	17018	Bernitz, Alexander:	
reports.....	13777	survey of Czechoslovak agriculture—	
Benzene, IUPAC samples, calorimetric		West Germany's domestic agricul-	
method of purity measurement		tural assistance program.....	15421
study.....	16343	Bernot, Peter T., pressure distribu-	
Benzyl ether, iron catalyzed hydro-		tions on blunt delta wings at	
genation.....	7216	angles up to 90° and Mach	
Berard, Paul F.:		number 6.85.....	14588
iron and steel castings, summary		Bernstein, Harry, performance of isen-	
for 1962.....	7758	tropic nose inlets at Mach num-	
iron and steel foundries and steel		ber of 5.6.....	14531
ingot producers, 1962, etc.....	16897	Berntsen, Carl M., 20-year growth	
steel mill products, 1962.....	20357	record for 3 stands of red alder....	6491
Berber, John S., vapor phase oxida-		Beroza, M., materials tested as insect	
tion of hydrocarbons in low-		attractants.....	14851
temperature coal tar.....	10955	Berries, bush berries, production, use,	
Berczeller, Jolan, relief.....	15199,	value, by States, 1961-62.....	16615
Beresford, Spencer M.:	20558	Berry, Arthur C., and others, relief....	6101
coordination of foreign scientific		Berryhill, Henry L., Jr., geology and	
policy.....	6202	coal resources of Belmont	
Geneva Conference on Peaceful		County, Ohio.....	19314
Uses of Outer Space, 1962.....	6204	Berryhill, Robert V., reconnaissance	
scientific and technical manpower,		of beach sands, Bristol Bay, Alas-	
supply, demand, and utilization		ka.....	10949
tion.....	6208	Berryman, William L., relief.....	15207
Berg, H. C., reconnaissance geology		Bertram, Mitchel H., calculation of	
of northern Baranof Island,		compressible average turbulent	
Alaska.....	10284	skin friction.....	5612

# INDEX 1963

	Entry		Entry
Beryl, spodumene concentrates containing 10 to 30 percent beryl, treating by fluosilicate process.	5480	Bewig, K. W.: investigation of fatty amine monolayers by contact potentials.	11166
Beryllium:		modification of ionization method for continuously recording contact potential differences.	18248
California and Nevada, investigations, 1959-62.	9114	Bexar County, Tex., ground-water geology.	14029
deposits—		Bey, Calvin F., underplanted hardwoods fail to make merchantable trees.	20694
Thomas Range, Juab County, Utah, geology.	16286	Beyster, J. R., integral neutron thermalization.	11553, 14968
Seward Peninsula, Alaska.	19306	Bezborod'ko, M. D., effect of composition and nature of gaseous media on anti-wear properties of petroleum lubricating oils.	13221, 6221
determination in urine by ion exchange separation and fluorimetric measurement.	14984	Bialogowski, Stanislaw, relief.	6221
Helen Beryl, Elkhorn and Tin Mountain pegmatites, exploration.	15608	Bianca, Lino Della-, see Della-Bianca, Lino.	
high purity, spectrochemical analysis.	1246	Biasiotta, Fiore L., relief.	15190, 20399
impurities, X-ray analysis of solubility, USSR study.	6764	Blaxial device for determining modulus of elasticity of stress-relief cores.	3086
license applications for plutonium-beryllium neutron sources for—		Bibbero, Donald S., aviation fixed base operations, starting and managing.	3326
uses other than well logging, guide for preparation.	15020	Bibliography:	
well logging, guide for preparation.	15021	accident prevention.	14916
Lynch Creek prospect, Lander County, Nev., sampling.	1252	activation analysis.	16856
recovery from—		advertising, volume and expenditures.	18307
Spor Mountain ore by solvent extraction and caustic stripping.	5499	aerial delivery research activities.	9368
Utah ore by fluosilicate process.	5483	aeronautics and space—	
spectrochemical determination in mineral beneficiation products.	3090	adult aerospace books and materials.	19886
toxicity technical engineering report, final.	5874	elementary grades.	19884
toxicology, clinical aspects of diseases, USSR study.	1021	secondary grades.	19885
Beryllium oxide:		aerospace.	48
irradiation behavior of BeO-UO <sub>2</sub> fuel as function of fuel-particle size.	14970	aerospace career and scholarship information.	4824
reactor program, experimental, progress report.	14962	aerospace medicine and biology.	9084
Beryllium sulfate, thermodynamic properties from 0° to 900°K.	10967	AFFTC technical publications, etc., 1952-62.	5863
BES series.	4832, 6353-54, 12084, 13873, 19124-126	Africa—	
Beta rays:		American doctoral dissertations on problems and prospects.	3044, 103, 2358
determination of beta activity in water.	8357	aging.	
treatment of uranium, summary report.	18553	agricultural development schemes in sub-Saharan Africa.	18053
Betatron:		Agricultural Economics, periodic reports.	4372
Institute of Atomic Physics, Rumanian Academy of Sciences.	8864	agricultural education.	388
treatment of brain tumors, USSR study.	19388	agricultural sciences, periodicals, Communist China.	12890
Bethlehem, Pa.:		agriculture.	3479
occupational wage survey—		agriculture, serial publications indexed in.	11092
departmental edition.	10907	air pollution.	3274
document edition.	9828	Alabama coals, research and technology work.	19837
Bethlehem-Sparrows Point Shipyard, leading U.S. builder of merchant ships (remarks).	3049	aliphatic compounds.	1869
Bethune, James E., pine tip moth damage to planted pines in south Florida.	17497	American history—	
Bettinger, Cynthia R., university business and economic research projects.	11280	departmental edition.	16812
Beuter, John H., 1961 Washington log production.	17503	document edition.	17058
Beverages:		aqueous slurries of coal and granular materials.	14497
industry, sweeteners used.	10049	ARA publications.	4431
quenching thirst of workers, prolonged observation under non-working conditions, comparative evaluation, USSR study.	2983	Arctic regions.	19073
supplies in retail stores, 1962, civil defense study.	1708	arms control and disarmament, studies in progress or recently completed.	18323, 1870, 4487
		aromatic compounds.	1870
		atomic energy literature.	4487
		what's available.	9686
		atomic energy program.	18586
		atomic radiation.	132
		battered child.	16912
		Behavioral Sciences Laboratory, reports.	18485
		box and crate construction and packaging data.	12154
		British East Africa, official publications.	7184-S5, 9090

# JANUARY-DECEMBER

	Entry
Bibliography—Continued	
business library, basic reference sources	3325
buying for retail stores	9385
cancer film guide, 1963	16492
ceramics	1867
cermets	1868
chemically modified oil products and industrial uses	5797
children and youth, understanding	15089
civil engineering, design and construction of nuclear facilities	4485
Clearinghouse Exchange of publications of State departments of education—	
elementary education personnel	17360
secondary education personnel	17361
cod, Gadus morhua and related species	12137
commercial information on American firms for international buyers	17562
Communism	11218
Communism, international developments, periodicals	12624
community health services	11230
computers	11598
concrete and cements	1866
consumer markets, current materials	13261
continuous casting, foreign literature	7741
contract farming and vertical integration	18182
control systems	1865
core program, 1961-63	17362
corrosion and protection of materials	10640
data processing and programming	18628
direct energy conversion and systems for nuclear auxiliary power (SNAP)	7708
discount retailing	1489
disease	1399
display systems	4437
dropouts	15425
drug literature	17311
education—	
exceptional children and youth, State education agency publications	13847
India	8182
international education	8180
selected references	8162, 17372, 17376, 19109
southeast Asia	8183
young children	8162
Educational Materials Laboratory reports	374, 10069
educational media, sources of information	15447
electrically exploded conductor phenomenon	5854
elementary school libraries	4814
endocarditis, 1957-62	21081
engineered performance standards	15030
evaluating elementary schools	17372
explosive forming, ASTIA report bibliography	4438
facilities and equipment for handicapped children	20642
failure of reactor fuels	5043
far infrared	12948
farm enterprise input-output data	10059
farm management records of Bureau of Agricultural Economics	7309
featherbedding, work rules, restriction of output	18014
Fish and Wildlife Service, Technology Branch publications	15523
flame extinguishment, literature research	11470
food preservation by irradiation	4553

	Entry
Bibliography—Continued	
foreign countries, statistical publications	3726
foreign languages—	
elementary school	12079
source materials for secondary school teachers	2169
addendum	8157
foreign social science series	1900, 7764
forest conservation	6489
forest genetics, research, 1927-61	2312
forests and related natural resources	10241
freeze-drying of foods	14593
freezing and thawing of soils	14832
Gambia, official publications	19810
gas hydrate compounds	19348
general-usage facilities and equipment for secondary schools	12080
gerontology, basic books and journals	20248
Government employment	11228
grouping children in elementary school	17376
handicrafts and home businesses	11272, 21105
health examinations, abstracts from literature	13020
health studies of human populations	1429
heat transfer from solid surfaces to cryogenic fluids	9210
highway traffic safety	7413
Hill-Burton publications	20104
home economics	5838
hospitals—	
central services	16508
emergency service, criteria for organization	14664
outpatient services	16507
planning and design	5493
utilization studies	3287
housing—	
aged, reading list for architects	15627
and planning	3773
building and planning, United States AID missions	15626
community planning	14040
human factors research	18487
hydroelectric power, pumped storage	7474
industrial diamonds	7740
industrial wastes, stabilization ponds for treatment	16527
information storage and retrieval	9707
inorganic catalysts	1872
international business	2380, 19352
International Geophysical Year, 1957-58, Russian literature	7296
investment	5880
investment and operating costs for chemical and petroleum plants, Jan.-Dec. 1962	12831
Kenya and Zanzibar, official publications	7184
Korean publications in National Agricultural Library	14594
labor-management relations	12775
role of Labor Department	14442
law enforcement and criminology	13212
libraries	17391
library science dissertations, 1925-60, doctoral studies, annotated	17380
linear programming	18627
literature, scientific and technical, Eastern Europe	5646
logging, milling, and utilization of timber products	12155
machine translation and information processing, foreign developments	14603
machine translations	15029
magnetic recording systems	13266
mail-order selling	3323, 20128

Do not order from index; see indicated entry

Page 119

# INDEX 1963

	Entry
<b>Bibliography—Continued</b>	
management planning and control techniques	7739
maps showing explorers' routes, trails and early roads in U.S., list	1192
marine borers	12945
Marine Corps historical bibliographies series	16305
marketing information guide	3886
marketing research procedures	11274
marriage and divorce	16512
mathematics, elementary school library	358
medical care of veteran	9479
medical reviews	12912
medical translations	9232
mental health	12907
mental health and psychiatric services, facilities design	3288
metal-halide vapor pressures	7206
metallurgy of molybdenum, niobium, and molybdenum-niobium alloys	18590
meteorological satellites	14773
meteorology	20901
for secondary schools	11379
metrazol, use for treatment of psychiatric disorders	16517
mice of genus <i>Microtus</i>	11584
migratory agricultural workers	6343
mobile homes	21107
molten salts	18589
motels	1488
mountain hemlock	10223
muskeg, review of research	1488
national defense language development program, research, etc.	4818
national directories for use in marketing	14687
national emergency labor disputes	9033
national security administration	4779
naval history, biography, strategy and tactics	9262
Naval Research Laboratory series	12948
nervous control of shivering, review of literature	18468
new products and processes	14933
non-ferrous metals, research reports and translations available from OTS	13265, 15028
North Korean scientific publications	16028
nuclear explosives, peaceful uses	7707
nuclear science conference literature	18601
nuclear theory reference book	11590, 13250
nursery business	11276
nursing homes and related facilities, State and local surveys	11238
nutrition and school lunch	18403
occupational safety	18028
oceanography	149
oil recovery by miscible-phase displacement	12828
organic catalysts	1869-71
oriental serial publications in zoological sciences	16414
OTS selective bibliography SB series	149, 1864-72, 4553-54, 7738-41, 9707, 11598, 13266, 15029-30, 18626-629, 148, 1864, 18625
list	18625
PACAF basic bibliographies	62, 5880-81, 9621, 11510-511, 13212, 14916, 18491-492
Pacific area	62
paraffins and other blocking agents that interfere with petroleum production	7207
parasitology, parasites, and parasitic infections	18629

	Entry
<b>Bibliography—Continued</b>	
particle accelerators, principles, theory, and design, guide to Soviet literature	10925
personal affairs	5880
personnel literature	4016
petroleum products	1869
photography	5881
pillowed lavas	6560
planning	1855
plasma physics and magnetohydrodynamics	4439
plastics—	
health hazards and toxicity	347
technical conference papers	1873, 17353
polymers, organic	1871
power reactors	15003
programmed instruction	18486
Project SIAT (synthesis of impact acceleration technology)	18354
psychopharmacology, central nervous system effects, animal research	21003
public health series	1429, 9348, 16517, 18292, 20110, 21093
publications of Education and Labor Committee, House	11894
pupil marks and school marking systems	19115
radiation effects on mammalian eye	18591
radio astronomy, atmospheric aspects	11100
radioactive materials, shipping and storage	18588
radionuclides and ionizing radiation in ornithology, wild and domestic birds	7716
ranges, southern management	20709
rare alkali metals	19489
reactor hot channel factor and burnout	5944
reactor safety	131, 18587
reading for profit, self-improvement books, etc., for blind	9091
reading, primary level, research	19116
reference books	9621
refuse collection and disposal	18292
reliability and quality control	18626
reliability literature survey, Air Force Flight Test Center	7609
research reports	4250
reservoirs, survey of world literature, USSR	6841
restaurants and other eating places	3324
retail business, operating costs and ratios	11273
retail credit and collections	21106
retailing	7427
Robinson, Edwin Arlington	9088
Rumania, guide	19812
rural recreation as business	6402
Russian serials translated into English, etc.	1191
sandwich construction	9316
school lunches, 1952-61	5617
school supplies and equipment administration	4822
science—	
and technology development	5097
elementary, professional literature for teachers	19109
publications, annotated guide to selected listings	13863
seasons and holidays	12059
servomechanisms	1865
sewage treatment	20110
shortleaf pine	8303
Sierra Leone, official publications	19810
small business	7427, 9385, 11272-275, 18307-309, 20128, 21105-107

# JANUARY-DECEMBER

	Entry		Entry
Bibliography—Continued		Big Bend National Park, general in-	
small office automation	11277	formation	9238
social science periodicals and		Big Bend Reservoir:	
monograph series—		change name—	
Denmark	7764	law	17028
Iceland	1900	reports	13630, 13706
soil and water conservation	5791, 18396	Big Creek, Calif., electric facilities	
index	5790	of area, map	520, 2266
Soviet Union scientific and tech-		Big Flat Irrigation District, repay-	
nical serials, 1945-60	19813	ment contract, modification,	
space environment effects on plas-		report	19028
tics	348	Big Flat Unit, see Missoula Valley	
space science and technology		project.	
books	9092	Big Hill Creek Reservoir:	
space vehicles attitude control sys-		flood control and water supply stor-	
tems techniques for analysis	47	age, engineer report—	
State reports on finances of State		departmental edition	398
government	5991	document edition	269
strip-mine reclamation	566	Big Hole Battlefield National Monu-	
suburban shopping centers	18308	ment:	
tale in U.S.	15607	general information	1345
Tanganyika official publications	9090	redesignate and revise boundaries—	
teaching machines	4440	law	11716
and programmed instruction	20644	reports	8067, 9875
technical reports, information re-		Big Hole National Battlefield:	
trieval list	10104	designating—	
technical translations, OTS peri-		law	11716
odical	4232	reports	8067, 9875
periodicals translated in, basic		Big Pine Creek:	
list	5957, 15025	flood control, engineer report—	
temperature measurement	18190	departmental edition	8197
tillage and traction	9	document edition	7860
training retail salespeople	14689	Big South Fork, see Cumberland River	
2-year community college, studies		and Valley.	
and surveys, 1957-61	20645	Big Stone Lake:	
U.S. marines in Civil War	16305	flood control, engineer report—	
Uganda, official publications	7185	departmental edition	2180
ultrasonic phenomena, etc	5473	document edition	2004
ultrasounds	4554	Biggers, James C., helicopter fuse-	
United Nations, new materials		lages, tests, errata	7256
useful in teaching	4813	Biggs, Archie A., fireplaces and	
United States, syllabus of Ameri-		chimneys	16735
can studies, USIA special list	18357	Bikini and nearby atolls, Marshall	
university business and economic		Islands (series)	19308
research reports, survey	11280	Bilbrey, Joseph H., Jr.:	
velocity of sound in petroleum re-		cobalt	18068
servoir rocks and other		iron and steel	16326, 19840
mediums	7205	nickel	18085
venereal disease	3410	Bile, fecal acid, of rats, effect of	
water pollution control	20110	dietary pectin and saponin	11549
water-rights laws, etc	1715	Bilhorn, D. E., reciprocity in quantum	
water supply and pollution con-		mechanics	18160
trol	14670	Bill Davis gets a social security	
water treatment	20110	card	7376
welding	7738	Bills (congressional):	
wholesale business, operating costs		armed services hearings on miscel-	
and ratios	11275	laneous bills	7986, 11881,
wildlife refuges	12140		11885, 13642, 15301
Women's Bureau, publications	14804	Coast Guard subcommittee hearing	
wood finishing	12156	on miscellaneous bills	2056
wood preservation	12157	digest	3601
see also names of departments, etc.,		history	3537
issuing lists of publications.		see also House bills—Senate bills—	
Bicarbonate, see Carbonates.		also subjects of bills.	
Bicarbonate of soda, see Soda (bak-		Bills affecting older persons, intro-	
ing).		duced, 88th Congress, 1st ses-	
Bicelli, L. Peraldo, hydrogen over-		sion	9508-9, 11410
voltage on metallic single		Billy Black Lamb	8366
crystals: gold	11473	Bindery workers, examination an-	
Biddeford, Maine:		ouncements	4616, 11658
Hills Beach, beach erosion control		Binding, see Bookbinding.	
study, engineer report—		Binghamton, N.Y.:	
departmental edition	420	Broome County Airport, weather	
document edition	272	observation, hourly, summary,	
Bidding, see Government contracts.		decennial census of climate	20239
Bienlewski, Carl L.:		relief, report	11806
mineral industry of—		Blossay, see Biological assay.	
Nebraska	1216	Bioastronautics, fields, papers	5546
South Dakota	1223	Biocenosis, marine, Soviet research	15961
Bienstock, Daniel, Fischer-Tropsch		Biochemical reactions, see Chemical	
oil-circulation process	9124	reactions.	
Biermann, L., plasma in inter-			
planetary space	19919		



# INDEX 1963

	Entry
Biochemistry:	
abstracts pertaining to Communist	
China in Soviet journals	733,
8738, 12545, 14084,	15796,
17975, 19554, 19566, 19600.	
Communist China	5150
new tasks in development of bio-	
chemical productions, USSR	
study	15675
radiation, elements	7641
radiation method of food preserva-	
tion, biochemical aspects,	
USSR study	6640
translations, USSR studies	8572
USSR studies	14397
Biochemists, examination announce-	
ments	7790, 9743
Bioclimatology, human sympatho-	
adrenal responsiveness in au-	
tumn, winter, and spring	16804
Bioelectricity:	
functional changes in spontaneous	
activity of brain during serum	
sensitization, USSR study	15784
metastatic brain tumors, mechan-	
ism governing massive	
changes in bioelectric activity,	
USSR study	812
muscle activity in occupational	
neuro-muscular diseases, USSR	
study	17976
Bioelectronics, foundations for human	
engineering	11262
Bioenergetics, problems, USSR study	20793
Bioenvironmental features of Ogotor-	
uk Creek area, Cape Thomp-	
son, Alaska	4494
Biography:	
Bulgaria, medical scientists	8821
Czechoslovak physical scientists	17592
Hungarian scientists	10761
Israeli scientific and technical per-	
sonalities	20899
naval, bibliography	9262
Syrian political personalities	2735
USSR—	
from Soviet encyclopedia, 1960	2625
information from Great Soviet	
encyclopedia	6744
scientists	788, 2930, 6966,
8949, 10652, 16069, 17812.	
who's who in Turkey	16124
women of 88th Congress	14808
see also subjects of biographical	
sketches.	
Biological assay, warm-water fishes	2298
Biological formation of flammable	
atmospheres	3085
Biological indicators of weak radio-	
active contaminations in north-	
ern seas, USSR	8992
Biological Laboratory, Beaufort, re-	
port, 1961	13954
Biological Laboratory, Galveston,	
fishery research, 1962	13955
Biological Laboratory, Honolulu,	
progress in 1961-62	15518
Biological physics:	
application of biophysics in agricul-	
ture, Chinese study	14360
USSR Academy of Sciences,	
reports	865, 5134
USSR studies	10555
Biological products, notices of activi-	
ties of licensed establishments	3480
see also Drugs.	
Biological sciences, see Biology.	
Biological warfare:	
contaminants, removal from water,	
methods	16520
defense against, East German in-	
struction material	705

	Entry
Biologists:	
Bulgaria, Asen I. Khadzhiolov, bio-	
graphic information	10859
fishery and wildlife—	
careers in Bureau of Sport Fish-	
eries and Wildlife, brochure	4940
examination announcement	11668
Hungary, 5th national session	6896
public health, examination an-	
nouncement, discontinuance	
notice	15104
Biology:	
abstracts pertaining to Communist	
China in Soviet journals	687,
8447, 8723, 15796, 16076, 17975,	
19523, 19539, 19554, 19600.	
achievements of modern biology	
(USSR periodical)	772
aerospace, bibliography	9084
applied, USSR translations	8565
aquatic—	
books, selected list	10193
selected references	20110
Arctic, symposia	18489
aspects of cybernetics, Rumanian	
study	20897
atomic radiation, biological effects,	
bibliography	132
biological effects of gamma-radia-	
tion and thermal injury	19472
biological problems in water pollu-	
tion, transactions of 1959 semi-	
nar	16521
biological sciences	
and agricultural production,	
USSR study	10780
development and strengthening,	
USSR study	19400
USSR studies	10461
USSR translations	8450
biological sequelae of level varia-	
tions in Lake Balkal, USSR	
study	8742
biological systematics in service of	
science and practice, USSR	
study	8683
cod, Gadus morhua and related	
species, bibliography	12137
college, study guide	4792
cutaneous cancer, conference, Apr.	
6-11, 1962	7315
cybernetics, biological aspects,	
USSR studies	1133, 12727
cybernetics, USSR study	2945
cybernetics session of USSR Acad-	
emy of Sciences, Dept. of	
Biological Sciences	2565
degrees earned in biological sci-	
ences, 1949-60	17365
East European journals, abstracts	778,
964, 1027, 1092, 2542,	2613,
2675, 2727, 2755, 2771,	2875,
2950, 5173, 5207, 5243,	5277,
5309, 6637B, 6672, 6699, 6711,	
6796, 6851, 6981, 7088, 8475,	
8479, 8522, 8609, 8615, 8775,	
8846, 8962, 10419, 10454, 10466,	
10536, 10547, 10610, 10677,	
10720, 10764, 10795-796, 10868,	
12298, 12300, 12555, 12558-560,	
12576, 12664, 12670, 12684-886,	
12740, 12744, 12747, 14109,	
14227, 14258, 14291, 14327,	
14334, 14370, 14375, 15696,	
15714, 15877, 16014, 16140,	
16162, 16166, 16201, 16219,	
17590, 17598, 17617, 17621,	
17639, 17692, 17791, 17824,	
17837, 17897, 17942, 17954,	
19428-429, 19540, 19585,	
19623, 19705, 19725, 19747,	
19771, 20794, 20840.	
eastern tropical Pacific Ocean, bio-	
logical observations	2290
fishery papers in nongovernment	
publications, 1940-56, index	19226

Entry	Entry
Biology—Continued	Biosynthesis:
growth of intraspecies biological forms of Arctic char <i>Salvelinus alpinus</i> of Kamchatka, USSR study	carbon-14 chamber, design and operation
20812	37
Hawaiian waters data, Jan.-July 1961	proteins and nucleic acids, Communist Chinese study
557	15889
high school course, USAFI study guide	Biotelemetry, cosmic, USSR study
2111, 6309	2471
Hungary, Biological and Medical Sciences Division, Academy of Sciences, activities	Birch:
6760	paper, site requirements and yield
institutions of Soviet Union, activities	20707
17799	yellow, fungus and insect injury to seeds and seedlings
lobster, Maine population biological fluctuations check, use of environmental and economic factor	Bird, Frederick L., property tax, role of States in strengthening
4944	20257
2795	Bird, Kermit:
molecular problems, USSR study—Philippine Archipelago, etc., contributions, title page, etc.	freeze-dried foods
11114	14870
2698	freeze-drying of food, look into future
Polish institutes, Bulgarian report, pollination of non-emasculated flowers, biological characteristics of hybrids, USSR study	19091
5176	7875, 13412, 13687
psychiatric research, need for broadening, USSR	Birds:
16003	Aleutian Islands National Wildlife Refuge
radioelectronics application, USSR conference	15531
2467	Bear River Refuge
804	15529
science of life, USSR study	Bitter Lake National Wildlife Refuge
sciences major principles for general education, evaluation, list	15527
4825	Bombay Hook National Wildlife Refuge
8639	15528
8658	Camas National Wildlife Refuge
USSR—	19240
activities	Cape Romain National Wildlife Refuge
decree further development of biological science, etc.	15526
developments in biological sciences	Chautauqua National Wildlife Refuge
17885	4960
12447	ecology of wild life, role of trouble factor
6644	16132
14280, 15814, 17587, 17933	Fish Springs National Wildlife Refuge
14339	4962
translations from Journal of general biology	Havasu Lake National Wildlife Refuge
14188	4959
translations from <i>Uspehi sovremennoy biologii</i>	Horicon National Wildlife Refuge
1002	6459
works of All-Union Hydrobiological Society (periodical)	Kenai National Moose Range
8474	15534
USSR Academy of Sciences herald, translations	Languna Atascosa National Wildlife Refuge
12661	6458
Uzbek biological journal (USSR periodical), translations	Malheur National Wildlife Refuge
15738	15530
White Sea, USSR book review	migration, general information
17820	6452
see also Bioclimatology—also Life on other planets—Marine biology—Microbiology—Radiobiology—Space biology.	Missisquoi National Wildlife Refuge
Biology and Medicine Division, AEC:	15532
atmospheric radioactivity and fallout research	Moosehorn National Wildlife Refuge
9689	4961
onsite ecological research, listing of projects, etc.	Morton National Wildlife Refuge
1841	13970
research and development abstracts	National Bison Range
15002	17458
Biometeorology, air pollution	Red Rock Lakes National Wildlife Refuge
1417	15533
Bionics:	reproductivity inhibition, recent findings
engineering art of nature, USSR study	559
5374	Sabine National Wildlife Refuge
sound signaling of cetaceans, new method of hunting aquatic animals, USSR study	10197
2881	Salton Sea National Wildlife Refuge
8731	6460
Biophysics, see Biological physics.	Sheldon National Antelope Refuge
Bio-sciences, English abstracts of selected articles from Soviet bio and mainland China technical journals (series)	12138
3626	17457
	wild, free importation—
	hearing
	15383
	report
	4742
	wildlife and domestic, radionuclides and ionizing radiation in ornithology, selected bibliography, see also Water birds—also names of birds.
	7716
	Birge, George W.:
	carbonizing properties of coals from—
	Elk Clarion, Jefferson, Clearfield, and Centre Counties, Pa.
	16333
	Kanawha County, W.Va.
	14510
	Birkhead, James W., nontariff barriers to movement of tobacco in free world countries
	12148
	Birmingham, Ala.:
	electric facilities of area, map.
	522, 2206
	income, education, and unemployment in neighborhoods
	5453
	Municipal Airport, weather observations, hourly, decennial census
	11386
	northeast hematite ores, flotation
	3081

# INDEX 1963

Entry	Entry
Birmingham, Ala.—Continued	Black Hills:
occupational wage survey—	Calamity Peak, S. Dak., geology
departmental edition.....	of area.....
document edition.....	cloud seeding experiments, 1961.....
Birnbaum, Abraham H., human fac-	geology and pegmatites of Four-
tors research in image systems,	mile quadrangle.....
status report.....	immature ponderosa pine, stand
Birren, James E., human aging.....	volume tables.....
Birth:	ponderosa pine, susceptibility to
birthplace and country of origin,	southwestern dwarfmistletoe.....
population of U.S., census,	southern—
1960.....	geology and uranium deposits
defects, spina bifida.....	(series) -- 6544, 10275, 12219, 20727
nativity, statistics, 1960, general	pegmatites and other Precam-
summary.....	brian rocks (series).....
State of birth, census of popula-	Black Mountain Golf and Country
tion, 1960.....	Club, sale of public lands in
see also Vital statistics.	Clark County, Nev., for use as
Birth control, reproduction aspects	private golf course.....
relevant to problems, scientific	Black Sea:
research, survey.....	fauna, influence of rapana bezoar
Blryuzov, S., war memoirs, Izvestiya	linné.....
praises new book.....	fish, differentiating ability, USSR
Bls (2-guanidoethyl) disulfide, distri-	statistical analysis.....
bution and chemical forms	planktonic algae grown in cultures,
given orally in protective doses	protein, fat, carbohydrate,
to mice.....	and ash content.....
Biscayne Key:	Black Warrior River:
beach erosion control study, engi-	hydroelectric generating facilities
neer report—	engineer report—
departmental edition.....	departmental edition.....
document edition.....	document edition.....
Bishop, C. E., manpower in farming	Blackberries, growing.....
and related occupations.....	Blackbody, radiation function, tables
Bishop, Dwight R.:	for wavenumber calculations.....
Argentina's livestock and meat in-	Blackburn, Maurice, physical, chem-
dustrial.....	ical, and biological observa-
Uruguay's livestock and meat indus-	tions in eastern tropical Pacific
try.....	Ocean, 3 cruises to Gulf of
Bishop, Sidney W., remarks, Oct. 25,	Tehuantepec, 1958-59.....
1963.....	Blackfoot Dam and Reservoir:
Bismarck, N. Dak., Municipal Airport,	engineer report—
weather observations, hourly	departmental edition.....
summary, decennial census.....	document edition.....
Bismuth:	Blackfoot River:
metal, mineral industry survey,	Blackfoot Dam and Reservoir, en-
quarterly.....	gineer report—
minerals yearbook chapter.....	departmental edition.....
Bison, general information.....	document edition.....
Bissell, Harold J., Lake Bonneville,	Blackhead, control, turkeys and
geology of southern Utah	chickens.....
Valley, Utah.....	Blackmore, Donald J.:
Biswas, S., hydrogen, etc., in 1960	wages and related benefits—
solar cosmic ray event.....	pt. 1, 82 labor markets, 1961-
Bits (tools):	62.....
drill bit, and rock stresses under	pt. 2, metropolitan areas, United
static loads.....	States and regional summaries,
Bitter Lake National Wildlife Refuge,	1961-62.....
birds.....	Blackmore, W. Edward, Detroit whole-
Bitting, H. Wayne, utilization of	sale food-distribution, facili-
wheat for food.....	ties.....
Bitumens:	Blacks Mountain Experimental Forest,
decancrogenization of products of	pine, insect-caused mortality,
shale treatment, USSR study.....	effects of sanitation-salvage
highway construction usage factors.....	cutting, 1938-59.....
Bituminous coal, see Coal.	Blackstone, Bruce I., more teachers for
Bituminous mines, see Coal mines and	business education.....
mining.	Blackwater National Wildlife Refuge,
BK-8, protein blood substitute, effect	general information.....
on coagulating blood system	Blackwood, James E.:
after infusion during surgery,	long hours and premium pay.....
USSR study.....	recent trends in employment and
Black, Deane M., establishing business	hours in durable goods manu-
in Australia.....	facturing.....
Black, J. F., organic coolant technol-	Bladder, see Urinary organs.
ogy, progress report.....	Blade, O. C.:
Black, R. A., geophysical methods of	burner fuel oils.....
exploring for buried channels	diesel fuel oils, 1962.....
in Monument Valley area, Ari-	motor gasolines, summer 1962.....
zona and Utah.....	Blades:
Black, Ralph J., refuse collection and	airloads, effect on helicopter rotor-
disposal.....	blade tip vortex.....
	tandem rotor configurations, motion,
	measurements.....

Entry	
Blades—Continued	
turbine, corrugated-insert air-cooled, for use in turboprop engine, cascade investigation of cooling characteristics.....	1268
Blaha, John T., helicopter equipped with rocket weapon system.....	11482
Blair, Edith D., directory of medical libraries outside United States and Canada .....	12913
Blair, Montgomery: commemorative stamp (poster).....	11205
life and work .....	11208
Blaisdell, Fred W., loss of energy at sharp-edged pipe junctions in water conveyance systems.....	16766
Blake, Henry E., Jr., fluorine analyses .....	20970
Blake, L. V., pulse-radar maximum-range calculation .....	12957, 18232
Blakley, Earl R., soil survey of Childress County, Tex.....	18321
Blanch, G., tables relating to radial Mathieu functions.....	84, 4397
Blanchard, Ulysse J., landing characteristics of winged reentry vehicle with all-skid landing gear having yielding-metal shock absorbers .....	1294
Blanco, Federico Lopez, <i>see</i> Lopez-Blanco, Federico.	
Bland, Samuel R., propeller whirl-flutter speeds and static-stability derivatives.....	18142
Bland, William M., Jr., aerodynamic heating data on flat-faced cylinder .....	14534
Blaney, Harry F., determining consumptive use and irrigation water requirements.....	46
Blast:	
effects on air-cleaning system.....	141
gages, BRL shock tube piezo-electric .....	9311
loading on airfoil in Mach number 0.7 airflow, experimental investigation .....	7263
Blast effects, <i>see</i> Blast.	
Blast furnaces:	
fuel oil injection, experimental procedure .....	3103
Iron—	
prereduced iron ore pellets, new raw material .....	3104
quenched with nitrogen, examination .....	10951
thermochemical model.....	10965
processes, automation by means of computers, USSR study.....	887
top gas, gravimetric methods for analyzing .....	5494
<i>see also</i> Slag.	
Blasting:	
ammonium nitrate agents, sensitized, safety recommendations .....	12830
cratering, effects of mechanical properties of material .....	7223
Iowa limestone quarries, vibrations .....	16340
methods of detonating charges, USSR study .....	14428
vibrations from instantaneous and millisecond-delayed quarry blasts .....	5479
Blew, J. Oscar, Jr., comparison of wood preservatives.....	12167-168
Blight, <i>see</i> names of blights or plants affected.	
Blind:	
aid, under social security act.....	2235
child, home and school programs, developments and trends.....	19121
early writings on.....	1586

Entry	
Blind—Continued	
Government employees reading assistants, employment without compensation, examination announcements, general amdt.....	6031
public assistance, program facts.....	10095
reading for profit, Braille books, etc., annotated list.....	9091
statistics, model reporting area—	
conference proceedings.....	5626
purpose, development, etc.....	11106
talking books for near blind, hearing .....	18945
veterans with loss or lost use of lower limb, grants for specially adapted housing, report.....	6149
Blindness:	
flash, and photostress—	
aerospace operations.....	18507
study .....	4422
Blister rust, <i>see</i> Comandra blister rust—White pine blister rust.	
BLM, <i>see</i> Land Management Bureau.	
Bloat in ruminants, current research.....	8
Blood:	
amount in organ determined by electroplethysmography .....	11084
analysis, detection of in-flight hyperventilation .....	5891
animal and human, technic for obtaining chromosome spreads.....	20310
anticoagulant therapy, laboratory techniques used in control, manual .....	16511
cerebral pulsation in closed cranial cavity .....	9193
circulation—	
arrest in deep hypothermia in rat, survival and tolerance.....	13205
cerebral, differential manometry, USSR study .....	17893
intracranial, physiology and clinical implications.....	21011
mammalian hibernation .....	11488
clinical hematology laboratory procedures .....	13242
coagulation system—	
infusion of protein blood substitute BK-8 during surgery, USSR study.....	16157
USSR study.....	12309
erythrocytes—	
average diameter during chronic action of small doses of ionizing radiation, USSR study.....	10639
biophysics, biochemistry and pathology, questions, USSR.....	10836
volume spectra, calibration of electronic counter and pulse height analyzer for plotting.....	20337
flow in rabbit ear, relation to skin temperature, influence of ambient temperature.....	14907
glycogen in mammals after single whole-body X-irradiation, cytochemistry, USSR study.....	8838
hematology and blood transfusion, USSR study.....	10665
hematology research.....	9096
hemopoietic tissue transplantation in radiation injuries, USSR study .....	17890
humans and animals in hot climates, physiology, USSR study .....	19707
influence of cosmic factors on blood system, USSR study.....	10661
intracranial circulation—	
action of certain pharmacological agents used.....	9195
mechanism .....	9194
regulation, characteristics.....	9196
lactate, analysis.....	16806

# INDEX 1963

Entry	Entry
Blood—Continued	BLS report series..... 1158-1167,
PCO <sub>2</sub> , effects of changes on brain	3023, 5436-37, 7142-60, 9043-
oxygenation..... 69	50, 10890-893, 14450-461,
plasma—	16272-275, 18031-32, 19785-791,
cholesterol of growing mice, in-	20926-927.
fluence of dietary factors..... 13245	Blue crabs, fishery in Chesapeake
fatty acid composition as influ-	Bay..... 4945
enced by dietary protein and	Blue Cross, <i>see</i> Health Insurance.
cholesterol..... 1811	Blue Mountains, ecology of pea aphid
preparations and their use, Ru-	in area..... 18445
manian study..... 10703	Blue Ridge Parkway:
problems of hematology and blood	general information..... 14608
transfusion (USSR periodical),	Moses H. Cone Memorial Park, gen-
translations..... 15916,	eral information..... 5639
rats, red cell formation rate at	Blue-sac disease of fish..... 13963
24° C and 5° C..... 13203	Blue Scout, <i>see</i> Rockets.
renal hemodynamics, effect of in-	Blue Scout, Jr., <i>see</i> Rockets.
creased venous pressure..... 4503	Blue Shield, <i>see</i> Health Insurance.
reversible hematuria and oliguria	Blue tongue, sheep, incidence re-
following elevation of renal	ported in U.S., 1962..... 14843
venous pressure..... 7721	Blueberries, storage and shelf life of
seasonal variations in volume and	packaged units..... 14867
metabolite levels of Husky	Blueprints, advantages for field use
dog..... 14910	in forestry, etc..... 17480
serum lipid and lipoprotein con-	Blum, Barton M.:
centrations, Military Academy	demonstration of 4 intensities of
graduates, 1952-60..... 13217	management in northern hard-
serum lipid concentrations, changes	woods..... 15580
with age in young men..... 9628	excessive exposure stimulates epi-
transfusion, bacteria-contaminated	cornic branching in young
blood, hemotransfusion reac-	northern hardwoods..... 20702
tions and complications, prophyl-	weeding in 10-year-old northern
axis and therapy, USSR	hardwoods, methods and time
study..... 10854	requirements..... 10220
tumorous lesions of hemopoietic	Blumle, L. J.:
system, classification, USSR	NASA topside sounder program..... 20984
study..... 17656	satellite observation of equatorial
typing, Soviet research, USSR	ionosphere..... 12869
studies..... 12587	Blycine, diets fed rats, stress
venous outflow from cranium,	studies..... 1758
mechanism..... 11085	Blyth, James E., labor potential for
viscosity, in vivo method to meas-	expanding forest industries in
ure, and factors associated	northeastern Minnesota..... 6513
with hindrance..... 7631	Board-foot and cubic-foot volume
whole, laboratory procedures,	computing equations for south-
ASWBPL manual..... 2112	eastern tree species..... 10243
Blood-brain barrier, <i>see</i> Hemato-	Board mills, <i>see</i> Building board
encephalic barrier.	mills — Paperboard mills —
Blood circulation, <i>see</i> Blood.	Pulp mills.
Blood pressure:	Board of Education of District of
cold pressor test, 20-year follow-up	Columbia, <i>see</i> District of
study..... 4421	Columbia.
hypertension, hypoxia effect..... 9629	Board of Regents of Smithsonian In-
in-flight measurement, low fre-	stitution, <i>see</i> Smithsonian In-
quency narrow band pass	stitution.
active filter..... 11483	Board of Trustees of Federal Old-Age
Blood transfusion, <i>see</i> Blood.	and Survivors Insurance and
Blood vessels:	Disability Insurance Trust
diseases, diagnosing by special	Funds—
methods, USSR study..... 2068	social security trust funds, status.. 18316
synthetic vascular prostheses,	report, 1962..... 7862
changes in mechanical prop-	Boardinghouses, USSR, motor tour-
erties, USSR study..... 9003	ists guidebook..... 8719
vascular prostheses, evaluation,	Boards of health, <i>see</i> Health boards
USSR study..... 18012	and departments.
venous pressure increased, effect on	Boards of review, Judge Advocate
renal hemodynamics..... 4503	General, court-martial reports,
venous tonus, determining, USSR	holdings and decisions..... 17344
study..... 17934	Boatbuilding and repairing industry,
Bloom, M. C., corrosion of steel due	outlook for 1963 and review
to concentration of alkali in	of 1962..... 5975
steam generating system..... 3231	Boating:
Bloom, P. A., flotation concentration	accidents reporting, rules and regu-
of complex barite-fluorspar	lations..... 11680
ore..... 10948	pleasure, Tennessee industry..... 1447
Blotting paper, Federal standard..... 533,	recreational—
12125	accidents, numbering and related
Blowers:	activities, report..... 9768
current industrial reports..... 3575, 7754	guide, changes..... 11677
industry outlook for 1963 and re-	Boatright, William B., description
view of 1962..... 4532	and preliminary calibration
BLS, <i>see</i> Labor Statistics Bureau.	tests of small arc-heated hy-
	personle wind tunnel..... 1275



# JANUARY-DECEMBER

	Entry		Entry
Boats, <i>see</i> Fishing vessels—PT boats.		Boiler shops, products industry, outlook for 1963 and review of 1962	4518
Boatswain's mates, <i>see</i> Aviation boatswain's mates.		Boilermen, <i>see</i> Firemen (stokers).	
Boatswain's mates, 1 & C, Navy training course	18219	Boilers:	
Boawn, Louis C., nitrogen status of corn evaluation by tissue tests	7542	concentrated LiOH effects on steel corrosion in steam generating systems, laboratory studies	3231
Bodies (aerodynamics), <i>see</i> Aerodynamics.		feed water, Mines Bureau service	10941
Bodies of revolution:		materials, construction, etc., marine engineering regulations	13336
blunt low-finesness-ratio, normal-force axial-force, pitching-moment characteristics, investigation	11012	naval, chemistry of high-vanadium oil-ash deposits	11182
flows past blunt bodies at transonic speeds	5561	Bolling:	
measurement of heat transfer in free flight by use of catcher calorimeter	14574	critical heat flux, empirical correlation for channels of various cross sections and orientation	14548
offset center-of-gravity location, equations for Newtonian static and dynamic aerodynamic coefficients	14546	nucleate-boiling ebullition, effect of multi-g accelerations	11017
torques induced by magnetic field	5613	Boiling water reactors, <i>see</i> Reactors (atomic).	
Bodine, John W., panel presentation, Dec. 11, 1962	1427	Boise, Idaho:	
Body composition:		Boise Air Terminal, weather observations, hourly decennial census	14787
human fat, measurement methods	16803	occupational wage survey—	
techniques for measuring, conference proceedings	5645	departmental edition	16285
document edition		document edition	15176
Body temperature:		Bokelman, W. Robert:	
and carbohydrate values in normal and endotoxin poisoned mice exposed to environmental temperatures	1754	bond sales for higher education, 1962	13842
effect of induced hypoxia on thermoregulation and cardiopulmonary function	11495	half-century of salaries at land-grant institutions	368
human digestive tract, radiotelemetric investigation, USSR study	19588	new construction, etc., on college campuses	17382
regulation, relationship of shivering	18469	salaries and fees in land-grant colleges and State universities, 1962-63	13862
thermal balance, maintaining in man	11496	Boldt, Charles E., stand volume tables for immature ponderosa pine in Black Hills	17491
thermal measurements on reindeer during rest and exercise	1751	Boles, Sara J., pressure forming of aluminum oxide	5500
<i>see also</i> Hyperthermia.		Bolivia:	
Boeckel, John H., environmental testing in exploration of space, satellite reliability	16395	agricultural commodities, agreements	7440, 9417, 11311, 13080, 13083
Boeing Company:		Cochabamba Valley feud necessitates intervention of Armed Forces	2604
overpricing of target seeking systems for Bomarc missile, GAO review	8318	Communist Party, program	779
TFX contract investigation, hearings	10015, 19056	Communists incite disturbances in Rio Abajo	2662
Boggess, Durward H., experiments in water-spreading at Newark, Del	612	defense, furnishing articles and services, agreement	3347
Boggy Creek:		food regulations	2430
central and southern Florida project, engineer report—		La Paz riots of Oct. 26, 1962	928
departmental edition	399	labor law and practice	9044
document edition	320	peasant leader attacks police, etc.	2857
Bogolyubov, Nikoloy N., asymptotic method for approximate solution to nonlinear differential equation of 3d order	3168	sending gift packages to Socialist sector suggests reforms to MNR political committee	881
Bohall, Robert W.:		sugar imports from Communist Zone, charges of harm to production, translation	2686
organization of wholesale fruit and vegetable markets in Miami and Tampa-St. Petersburg	7574	Bolivian comments on U.S. aid and freer trade in Latin America	1067
packing mature green tomatoes, quality, etc., in Lower Rio Grande Valley of Texas	20287	Bollinidae, family, quantitative and qualitative analysis	12230
Bohner, George E., radiation energy transfer mechanisms of chemical systems	9466	Boll weevils, <i>see</i> Weevils.	
Bohon, Herman L., flutter of flat rectangular orthotropic panels with biaxial loading and arbitrary flow direction	19924	Bollers, Thomas B., and wife, relief	20569
		Bollinger, Loren E.:	
		formation of detonation waves in variable geometry tubes	12887
		thermodynamic calculations of carbon monoxide-air detonation parameters	1318
		errata	11043
		Bollworms:	
		Heliothis species rearing on artificial medium, laboratory techniques	18391
		tomato fruitworm, control	11453
		<i>see also</i> Pink bollworms.	
		Bologa, V. L., bibliography	8951

# INDEX 1963

	Entry
Bolsnaya medistsinskaya entsiklopediya (periodical): translations-----	5168, 5371, 8620, 8773
Bolt, R. O.: radiation stability of organic fluids, etc-----	4493
radiolysis of organic fluids-----	15013
Bolta, Arthur W., relief-----	20568
Bolts and nuts: bridge girder assembly by high strength screw bolt method, Communist Chinese study-----	10489
chamfered holes, effect on resistance of bolts to shock loads in shear-----	11160
rock bolt anchored by explosive forming-----	14515
Boltz, Frederick W., Z-function solutions for motion and heating during atmosphere entry from equatorial orbits of rotating planet-----	5583
Bomarc, see Missiles.	
Bombay Hook National Wildlife Refuge: birds-----	15528
general information-----	6456
Bombing airplanes, see Airplanes.	
Bombs, aircraft and fuzes, etc., ordnance pamphlet-----	12959
see also Atomic bombs.	
Bomhard, Miriam L., palm trees in United States-----	18418
Bonaaccorso, Josephine M., see Bowtell, Josephine M.	
Bonavito, N. L., differential correction for Vinti's accurate intermediary orbit-----	1283
Bond, Gorman M., geographic variation in thrush <i>Hylocichla ustulata</i> -----	7324
Bond, James, effects of loud sounds on physiology and behavior of swine-----	5846
Bond, Robert J., measuring metropolitan markets-----	9705
Bond, Ruth T., travel information offices maintained by States, etc-----	3389
Bond paper, see Paper.	
Bonding: excess of \$500,000 under welfare and pension plans disclosure act-----	10884
requirements of Landrum-Griffin act, investigation, hearing-----	11891
see also Bonds of officers, etc.	
Bonding materials, plasma-sprayed, particle substrate, preliminary investigation-----	18136
Bonds: financing, for industrial development, intergovernmental relations-----	14813
foreign, new issues in U.S. market-----	12120
highway bond financing, analysis 1950-62-----	21097
prices-----	3989
sales for: higher education, 1962-----	13842
public school purposes-----	
July 1, 1961-June 30, 1962-----	4807
July 1, 1962-June 30, 1963-----	20630
water and sewer, 1962-----	11248
Virgin Islands general obligation bonds, authorize issue, reports-----	7919, 20578
see also Bonds of United States-Guaranties and sureties-Savings bonds.	
Bonds of officers, etc., Federal employees, report, 1962-----	336
Bonds of United States: 3% percent Treasury bonds, 1968-----	7489
3% percent Treasury bonds of-----	20211

	Entry
Bonds of United States-Continued	
1971-----	1574, 7491
1974-----	7493
4 percent Treasury bonds-----	
1970-----	14758
1973-----	20212
1980-----	1575, 7492
1988-93-----	13103
4 1/2 percent Treasury bonds, 1989-94-----	13104, 20213
see also Savings bonds.	
Bone marrow, see Marrow.	
Bones, James T., comparing inventory and woods utilization standards in southeast Alaska-----	12159
Bones: changes in osseous system of dogs in radioactive strontium affection, USSR study-----	2959
radiation sickness, effect on bone tissue nerves of animals, USSR study-----	17662
Bonner, Robert H., spatial disorientation, current concepts and aeromedical implications-----	20309
Bonneville, Lake: geology of southern Cache Valley, Utah-----	2345
geology of southern Utah Valley, Utah-----	5019
isostatic deformation-----	20736
Bonneville Dam: fish passage report, 1961-----	396
pool area, fall chinook salmon returns to hatcheries, 1945-60-----	6468
Bonneville Power Administration: appropriations, 1964, hearings-----	17162
generation and sales statistics-----	
calendar year 1962-----	7722
fiscal year 1963-----	18612
marketing area, define-----	
hearings-----	13656
reports-----	8072, 13245, 17117
Technical Laboratory safety manual-----	13255
Bonus (military): code of Federal regulations-----	10170
Bonus system for creating and introducing new techniques, USSR study-----	10402
Bookbinders, examination announcements-----	9763, 18721
Bookbinding, theory and practice-----	12237
Booker, Jonathan, intermetallic compounds for very high temperature applications-----	11518
Bookkeeping, in planning organizations, USSR study-----	20808
Bookkeeping service, mechanization problems, USSR studies-----	16083
Books, Kenneth G., aeroradioactivity survey, etc., Los Angeles region, Calif-----	5927
Books: copyrighted, catalog of copyright entries-----	33, 12031
Federal item identification guides for supply cataloging, supplements-----	3659
for leaders who work with children and youth-----	15089
Library of Congress-----	
author catalog-----	3941
subject catalog-----	3864
cumulative-----	19809
on many subjects by your Government-----	7391
publishing industry, outlook for 1963 and review of 1962-----	4538
space science and technology, 1957-61, bibliography-----	9092
see also Reference books-Text-books.	
Books (talking), see Talking books.	

# JANUARY-DECEMBER

	Entry		Entry
Bookshelf of community aids series	14932-933	Boswell, Victor R.:	
Boolean algebra, <i>see</i> Algebra.		commercial growing of carrots	13170
Boone, W. J. Jr., vapor-liquid equilibria for helium-nitrogen-methane system	7215	rhubarb production, outdoors and in	5823
Boone County, Mo., soil survey	3335	Botanic Garden:	
Boosters (ordnance):		appropriations, 1964, legislative—	
large 1/2-scale dynamic radio-controlled, free-flight investigation of deployment, dynamic stability, and control characteristics	18151	hearings	13791
Boots and shoes:		reports	11830, 13750
footwear—		Botanical gardens, Olustee Arboretum, performance of forest trees	19269
and leather series, report	9369	Botany, Communist China, Chinese-Soviet expeditions to southwest, results	16231
industry wage survey	1090S	Bothnia, Gulf of, lights and fog signals, list	1753, 19990
production by manufacturer's selling price	20353	Botkin's disease, <i>see</i> Hepatitis.	
shoes and slippers, current industrial reports	1894, 3574	Bottenberg, Robert A., applied multiple linear regression	13213
sole leather, rapid tannage using domestic materials	9369	Bottom fish survey off Oregon coast	19228
Tatar ASSR, conference on footwear industry problems, USSR report	15881	Botulism:	
Borates, mining, underground, Kern County, Calif.	3073	botulinum pathogen problem in canning industry, USSR study	2721
Borchardt, Narnie, foundation expenditures for medical and health-related research and education, 1960	3178	destruction of labelled preparation of toxin in body of white mice, USSR study	842
Borchers, Raymond V., satellite orbit computation program, etc.	5578	type B Cl botulinum proteinase, isolation, etc., USSR study	5109
Boren Clay Products Co., relief	18816	Boulder batholith, geology of area along west margin	20729
Boretzky, Michael, Soviet challenge to U.S. machine building	7742	Boulger, F. W., metallurgical variables effect in ship-plate steels on transition temperatures in drop-weight, etc., tests	5715
Borides:		Boundaries:	
radiation effects	14972-973	international boundary studies	20146-
rare earth metals	119		167
<i>see also</i> Titanium boride.		lubrication, characteristics of bearing steel in liquid oxygen	5589
Boring insects, <i>see</i> names of insects.		shore and sea, with special reference to Coast and Geodetic Survey data	198
Bormuth, W. D., production of manufactured dairy products, 1962	16620	studies—	
Borneo:		Afghanistan-Iran	20151
North—		Algeria-Libya	20146
Peace Corps program, agreement	3350	Belgium-Germany	20152
UN activities	19615	British Guiana-Venezuela	20166
south, southeast and east coasts, sailing directions	3206	British Honduras-Guatemala	20153
west coast, sailing directions	7351	Central African Republic-Sudan	20161
Boron:		Chad-Libya	20148
compounds and alloys	118	Chad-Sudan	20160
minerals yearbook chapter	18065	China-Hong Kong	20158
rare metal alloys, radio and electrical applications, USSR study	6832	China-Korea	20162
Boron carbide, physicochemical investigations of SiC-B <sub>4</sub> C section of Si-B-C system, USSR study	938	Dominican Republic-Haiti	20150
Boron nitride, refractory based on, USSR study	697	France-Italy	20149
BOSP series	16921	France-Switzerland	20156
Rost, William E., molten salts, selected references	18589	Italy-Switzerland	20157
Boston, Mass.:		Korea, military demarcation line	20167
aircraft accident	15096	Laos-Thailand	20165
census of housing, 1960, standard metropolitan statistical area components of inventory change	1904	Libya-Niger	20147
consumer expenditures and income, 1960, advance report	1167, 7152	Libya-Sudan	20155
electric facilities of area, map	516, 2266	Morocco-Spanish Sahara	20154
income, education and unemployment in neighborhoods	7171	Sudan-United Arab Republic, Egypt	20163
occupational wage survey—		U.S.-Russia convention line of 1867	20159
departmental edition	5442	Viet-Nam demarcation line	20164
document edition	4698	visual, for immediate perception of vertical rate of descent	5591
wholesale florist facilities	35	water, pilotage services on Great Lakes and St. Lawrence River, agreement with Canada	11320
Boston and Maine RR., accident	19370	Boundary layer:	
		and crystal growth, Hungarian study	19700
		characteristics on forward parts of 9 fuselages of various cross-sectional shapes at Mach number of 2.01	5533
		fluid amplifier handbook design	9313

## INDEX 1963

	Entry		Entry
Boundary layer—Continued		Boy Scouts of America—Continued	
fuselage, removal, evaluation of		Philadelphia Council, conservation	
ram-scoop throat bleed in combination with ramp-type side		award, presentation (remarks)—	16760
inlet	5523	report, 1962	18797
hydromagnetic stagnation-point		Boyce, Stephen G., reduce sprouting	
boundary layer with arbitrary		of pruned white oak trees with	
pressure gradient and magnetic		motor oil	13988
field, analysis	11044	Boyd, Alan S., address before Jackson-	
lamina compressible, similarity		ville area Chamber of Commerce,	
solutions for small cross		commerce, Jacksonville, Fla., Dec.	
flows, errata	11088	20, 1962	1930
laminar separation induced by flares		Bozman, William R., phototypesetting	
on cylinders at zero angle of		of computer output, example	
attack	9199	using tabular data	14559
removal at Mach numbers from 0.85		Bracken, Jerome, minimal weighted	
to 3.50 of circular internal		radionuclide intake, mathematical	
compression inlets with translating		programming models	
centerbodies	10982	for selection	20093
separation, heat transfer to blunt		Bracken fern, livestock poisoning	
conical bodies having cavities		in Western States, reducing	
similar solutions and correlation		losses	14856
equations for laminar heat		Braderman, Eugene M.:	
transfer distribution, etc.	19943	addresses—	
supersonic turbulent heat transfer		Jan. 14, 1963	5091
measurements on attached protuberances at Mach numbers		Mar. 13, 1963	6585
of 2.65, 3.51 and 4.44	3124	Mar. 15, 1963	6623
transition, fabrication-type surface		Apr. 24, 1963	10328
roughness effect	16400	May 9, 1963	10329
turbulent—		June 17, 1963	14070
energy budget at earth's surface	16756-757	Sept. 23, 1963	19353
wall pressure fluctuations in flow		Oct. 8, 1963	18749
of cylindrical pipe, etc.	11263	Bradley, Mrs. Johnson, land and improvements, compensation	13517
Bourbon whiskey, see Whiskey.		Bradley, Nell B., disabling work-injury experience in oil industry and natural gas industry in United States, 1962	20944
Bouvier, Joyce M., relief	11934	Bradley Lake:	
Bovard, K. P., research with beef cattle at Front Royal Station	1656	hydroelectric power, engineer report—	
Bowditch, David N., turbojet engine in combination with external internal-compression inlet to Mach 2.88	5562	departmental edition	421
Bowditch, Nathaniel, American practical navigator	11136	document edition	227
Bowen, Hugh M., tracking training, effectiveness of general vehicular research tool	9272	Brady, W. Gordon, impinging uniform jets	14753
Bowers, R. C., frictional properties of polyethylenes, etc.	14633	Bragdon, John S., nomination, report	20541
Bowles, K. L., profiles of electron density over magnetic equator obtained using incoherent scatter technique	7312	Brain:	
Bowles, Oliver:		activity during muscular work, USSR study	891
sandstone as dimension stone	16324	and consciousness, USSR study	15904
traprock	19836	cerebral excess lactate production during hyperventilation of anesthetized dogs	80
Bowles, Otis R., relief	18818	decrebration and decortication, effects on shivering in cat	11491
Bowles, R. E., fluid amplifier handbook	9312	electroplethymography to investigate cerebrospinal fluid and blood	11054
Bowman, Gary H., nylon as ablative material for ballistic missiles	10995	hermetic cavity, pressure fluctuations	9197
Bowman, Paul H., motivations of youth for leaving school	19095	hypothermia by esophageal cooling technic	13216
Bowman, Raymond T., special report on unemployment statistics, meaning and measurement	4506	intracranial circulation—	
Bowtell, Josephine M., relief	7903, 13402, 13692	action of certain pharmacological agents	9195
Box fillers, see Filling machines.		mechanism	9194
Boxes:		physiology and clinical implications	21011
construction and packaging data, publications, list	12154	regulation, characteristics	9196
fiber, industry, outlook for 1963 and review of 1962	4520	its own type of computer, USSR study	6761
filled grape, machine for picking up	14836	lipid peroxides, effect of oxygen-rich atmospheres	9106
Boy Scouts of America:		metastatic tumors, mechanism governing massive changes in bioelectric activity, USSR study	812
military equipment, etc., for 1964 national jamboree to be held at Valley Forge State Park, Pa.—		nature of thinking and problem of modeling it through cybernetics, USSR study	16035
law	13415	neuron excitation, electrophysical, histochemical, and cytomorphological indices, USSR study	6800
reports	4733, 11976		

# JANUARY-DECEMBER

Entry	Entry
Brain—Continued	Brazil—Continued
oxygenation, effects of changes in blood PCO <sub>2</sub> ..... 69	exports and imports, licensing and exchange controls..... 6607
probability prognostication in functioning, USSR study..... 16184	fishing industry, 1962..... 19237
pulsation in closed cranial cavity—research advances in neurological and sensory disorders..... 1338	foreign trade, 1960-61..... 2398
serum sensitization course, spontaneous bioelectric activity changes, USSR study..... 15784	gazetteer, official standard names..... 17517
squirrel monkey's, stereotaxic atlas..... 7318	ground-water provinces..... 814
tumors, use of betatron and radio-active gold in treatment, USSR study..... 19388	living conditions..... 2427
see also Cerebral cortex—Electroencephalography—Hematoencephalic barrier—Hypothalamus.	piranha eradication in inland waters..... 13962
Brain waves, alpha rhythm feedback control unit..... 11180	reaction to US criticism of trade with Communist bloc..... 2581
Brainerd, Minn., milkshed, factors influencing strontium 90 in milk..... 3279	rural unionization—president of ULTAB suggests new framework..... 2583
Branchiobdellidae, see Annelids.	translation..... 2803
Brandaris Insurance Co., settlement of claims against members of U.S. Armed Forces, agreement with Germany..... 13079	southeastern and northeastern, geographic studies..... 2900
Brander, Robert, porcupine winter feeding activity in merchantable stands of northern hardwood, hemlock..... 15563	what are the peasant leagues? Francisco Juliao's book, review..... 2696
Brandes, Ely M., civilian nuclear power program, economic benefits from continuing, evaluation..... 15000	Brazilian Petroleum Co., annual report, 1962..... 15709
Brandy, P. J., types of tumors found by Federal meat inspectors in 8-year survey..... 9554	Brazing, see Solders and soldering.
Brandt, Allen D., panel presentation Dec. 11, 1962..... 1424	Brazinsky, Irving, photographic study of liquid hydrogen under simulated zero gravity conditions..... 11013
Brannan, F. T., termite repellents, field evaluation..... 11188	Brazos River: watershed improvement, engineer report—departmental edition..... 4870
Branner, George C., secondary non-ferrous metals industry in California, etc..... 5471	document edition..... 4692
Brantley, F. E., deoxidation of blister copper by gaseous reduction..... 1249	Bread, importation, duty treatment, report..... 4739
Brass: mills, scrap and metal consumption and stocks, mineral industry survey, monthly..... 3482	Breakfast foods, see Cereals as food.
scrap, consumers, mineral industry survey, monthly..... 3559	Breakwaters: and navigation entrance, Lorain Harbor, Lorain, Ohio, hydraulic model investigation..... 13887
Brass mills, industry, outlook for 1963 and review of 1962..... 4535	engineering and design manual..... 13878
Brassieres, current industrial reports..... 11618	optimum length and location, Superior entry, Duluth-Superior Harbor, Superior, Wis., hydraulic model tests..... 4874
Braun, Cyril M., national policy for educational television..... 8178	Breast: cancer..... 20097
Braun, J. R., military small group performance under isolation and stress, critical review..... 1764	pathological processes, occurrence, effect of endocrine preparations, USSR study..... 17985
Braun, Kurt, labor law and practice in Colombia..... 9043	Breast feeding, influence on children's behavior..... 15094
Braun, Willis H., boundary layer with arbitrary pressure gradient and magnetic field, analysis..... 11044	Breathholding, see Respiration.
Brave against enemy..... 19345	Breathing apparatus, respiratory devices for protection against pesticides..... 9538
Bravi, Rita M., relief..... 16999	Breathitt County, Ky., coal geology of Seitz quadrangle..... 598
Bray, A. P., high power density development project..... 7694	Breeder reactors, see Reactors (atomic).
Brazil: agricultural commodities, agreements..... 14716	Breeding, see Cattle—Hybridization.
atomic energy, equipment for use by Institute of Biophysics of University agreement..... 14719	Breedlove, Carolina H., Billy Black Lamb..... 8366
Communist political activity..... 2617	Bregger, John E., factory earnings reach \$100 a week..... 18045
economic developments, 1962..... 8407	Breimyer, Harold F., lectures, Mar. 11-13, 1963..... 9529
education exchange programs, financing, agreement..... 20180	Bremsstrahlung radiation, auroral, effect on lower ionosphere..... 21006
	Brennau, Robert, chemical quality of surface waters in Sacramento River basin..... 12236
	Breslin, A. J., Operation Plumbbob, protection against fallout radiation in simple structures..... 16861
	Bressenden, Ray F., study of human pilots' ability to detect angular motion with application to control of space rendezvous..... 1296
	Bretton Woods agreement act, see International Monetary Fund.
	Brewer, Allen A.: checking registration of centric relationship for complete dentures..... 77



# INDEX 1963

Entry	Entry
Brewer, Allen A.—Continued	British Columbia, sailing directions— 5648, 21045
method for recording deformation	British East Africa :
in double processing of den-	official publications—
ture bases— 78	Kenya and Zanzibar, bibliogra-
Brewer, Harley, and wife, relief— 7898	phy— 7184
Brewster, Agnes W., State employees' health benefit programs— 14663	Tanganyika, bibliography— 9090
Brezhnev, Leonid I., speech, Feb. 27, 1963— 17803	Uganda, bibliography— 7185
Breznyak, E. J., tungsten forging development program— 7597	British Guiana :
Bribery, sporting contests, prohibit schemes, report— 20588	ground-water conditions in coastal artesian basin— 15619
Bricker, Wilmer R., relief— 11770, 18984, 20397	translations— 8713
Bricks, housing renovation and brick design, Chinese study— 14234	Venezuela boundary, study— 20166
Bridge to employment, demonstration manpower programs— 19781	British Guiana, Friends of, <i>see</i> Friends of British Guiana.
Bridges, D. W., metallurgical application of solvent extraction, fundamentals of process— 1205	British Honduras :
Bridges :	Guatemala boundary, study— 20153
bridge girder assembly by high strength screw bolt method— 10489	plant quarantine, import requirements— 11443
highway, standard plans for— concrete superstructures— 5701	British Isles, <i>see</i> Great Britain.
continuous bridges— 5704	Brittle fracture :
structural steel superstructures— 5702	crystal, theory of initiation of cracks formed, USSR study— 5419
timber bridges— 5703	NRL drop-weight test— 11173
natural disaster damage, Federal assistance available— 14680	reactor construction materials, effect of neutron irradiation— 9690
over navigable waters, approve certain navigation practices—	steel, low temperature fatigue cracks as deliberate fracture origins— 11168
law— 20444	stress gradient and stress biaxiality effect on behavior of materials— 7602
reports— 11836, 19031	<i>see also</i> Fracture of metals.
permits for work in navigable waters— 4867	BRL, <i>see</i> Ballistic Research Laboratories.
<i>see also</i> names of bridges, or bodies of water to be bridged.	Broadcasting, <i>see</i> Radio broadcasting—Radio stations—Telecasting—Television.
Bridges (electric), <i>see</i> Electric bridges.	Broadfoot, W. M., water oak sites— 15585
Bridging utilization engineering development to industrial use— 1638	Broadhead, Kenneth G., radiotracer applications in electrometallurgical processing— 9125
Brief cases, current industrial reports— 3574	Brodd, Ralph J., impedance of commercial Leclanché dry cells and batteries— 14600
Briggle, L. W., classification of Triticum species and wheat varieties grown in U.S.— 11467	Broderick, Gertrude G., educational AM and FM radio and educational television stations— 10068
Briggs, George E. :	Brollers, <i>see</i> Chickens.
augmented feedback and acquisition and transfer of skill— 3218	Brokaw, Leland D. :
training for partial-panel control skills— 5658	prediction of technical school success from homogeneous biographical inventory scores— 67
Brightness of sky, <i>see</i> Sky.	technical training success prediction from educational information— 16784
Brightness temperature of Venus at 1.35 cm— 18252	Broken Bow, Okla. :
Brighton Town, N.Y., population, special census— 18693	Broken Bow Reservoir project, engineer report—
Brill, Daniel H., recent changes in liquidity— 13937	departmental edition— 400
Brill, G. D., conservation methods for soils of northern coastal plain— 7559	document edition— 322
Brines :	Brookhaven National Laboratory :
from oil-productive formations— south Arkansas and north Louisiana, analyses— 18099	geology— 14018
Mississippi and Alabama, analyses— 5493	sediments from vicinity, physical properties and mineralogy— 17526
Brining, <i>see</i> names of commodities brined.	studies of sites for nuclear energy facilities (series)— 14018, 17526
Brinquets :	Brooklyn Borough, <i>see</i> New York City.
aluminum powder, method of briquetting— 8545	Brookover, Wilbur, sociological analysis of vocational education in U.S.— 13846
minerals yearbook chapter— 16321	Brooks, Cuyler W., Jr., effects of nose bluntness, etc., on aerodynamic characteristics of blunt cones at angles of attack to 180°— 16399
Briscoe, C. B. :	Brooks, P. T., separation and recovery of cobalt and nickel by solvent extraction and electrorefining— 5486, 9118
height growth of mahogany seedlings— 8295	Brotherhood of Locomotive Engineers, emergency board reports— 8190, 12082
tree diameter growth in dry limestone hills— 8294	
Bristol Bay, beach sands, reconnaissance— 10949	
Brisk, Yom T. Y., relief— 17202	

Entry	Entry
Brotherhood of Locomotive Firemen and Enginemen, emergency board report-----	12082
Brotherhood of Railroad Trainmen, emergency board report-----	12082
Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, emergency board report-----	6351
Brothers, Chester A., and wife, relief-----	18815
Brotman, Herman B., income of older people-----	20247
Broughton, Marguerite L., relief-----	15197.
18980, 20402	
Brouillard, Keith D., economic review of Great Lakes commercial fisheries, 1940-59-----	13952
Broullire, John M., remarks, May 16, 1963-----	10149
Browar, Elliott A.: occupational wage survey-----	
Akron, Ohio-----	18036
Canton, Ohio-----	14471
Charleston, W. Va-----	14468
Cincinnati, Ohio-Ky-----	12801
Dayton, Ohio-----	10899
Detroit, Mich-----	12794
Louisville, Ky-Ind-----	12795
Muskegon-Muskegon Heights, Mich-----	16280
Toledo, Ohio-----	12798
Broward County, Fla., truck crop production practices-----	2126
Brown, Clarence A., Jr., Trailblazer II 3-stage rocket vehicle having various fin configurations, static aerodynamic characteristics at low subsonic Mach numbers and angles of attack up to 28°-----	11062
Brown, Douglas E., fast solid-state ultraviolet photodetector-----	20299
Brown, Emma E., abstracts of USA-PRO research publications, 1962-----	4461
Brown, Gerald A.: addresses-----	
Nov. 7, 1962-----	1340
Feb. 1, 1963-----	5631
Brown, Harry E., canopy camera-----	4991
Brown, Ingrid G. S., relief-----	18832
Brown, J. D., electron probe X-ray spectrophotograph-----	3074
Brown, James K., crown weights in red pine plantations-----	15566
Brown, James R., structure of small business in Alabama-----	1460
Brown, John N.: reappointment-----	
law-----	9809
reports-----	6094, 8086
Brown, Kenneth E.: analysis of research in teaching of mathematics, 1959 and 1960-----	10061
mathematics and science teachers in U.S. high schools-----	8177
Brown, Lester R.: agricultural diversification and economic development in Thailand-----	8154
food consumption and expenditures, India, Japan, United States-----	2134
Brown, Oliver, relief-----	7879, 18993, 20405
Brown, Ronald D., subsonic high-temperature arc tunnel-----	11024
Brown, R. F., reconnaissance of ground-water resources in Mississippi Plateau region, Ky-----	12233
Brown, S. G.: ground-water resources-----	
coastal sand-dune area north of Coos Bay, Oreg-----	2356
Cow Valley, Malheur County, Oreg-----	613
Brown, S. G.—Continued	
problems of utilizing ground water in west-side business district of Portland, Oreg-----	5038
Brown, Sidney E., increasing broiler sales through offering additional cut and recipe materials-----	15419
Brown, W. Herbert: costs and returns, commercial cotton farms-----	
1961-----	2123
1962-----	12046
Brown-Raymond-Walsh: Navy contract for Spanish base construction program, failure to recover excessive administrative costs included in negotiated fixed prices-----	
GAO review-----	13994
Defense Dept. reply, GAO report-----	20713
Brown Swiss cattle, see Cattle.	
Browne, F. L., effect of various chemicals on thermogravimetric analysis of ponderosa pine-----	19266
Browning, James S.: concentration of fine mica flotation of barite-fluorspar ores from Kentucky-----	10956
9120	
Brownsville, Tex., laboratory tests of insecticides and acaricides-----	18392
Brozek, Josef, measuring body composition conference proceedings-----	5645
Bruce, David W., toxicity of rare earth nitrates and oxides-----	18502
Brucellosis: eradication-----	
activities in cooperation with States-----	4219
cooperation with States, summary-----	4217
recommended uniform methods and rules-----	4342
State-Federal cooperative program-----	
maps-----	3556
progress report-----	9544
statistical tables, 1962-----	14
statistical tables, 1963-----	20265
Bruces Eddy Dam and Reservoir: change name-----	
law-----	17026
reports-----	13631, 13705
Brunson, M. H., bioassay of toxicity of insecticide residues to codling moth in apple orchards-----	20261
Brunstein, Alan L., study of fatal general aviation accidents involving weather-----	16921
Brush: chemical control in California reforestation-----	6495
cover in watersheds, cost of converting to grass for increased water yield-----	17482
equipment for clearing land-----	1694
preplanting treatments for brushy old fields in southern Illinois-----	13986
Brush Beryllium Co., prices awarded for Polaris missile parts, GAO examination-----	10259
Brushes, Federal item identification guides for supply cataloging, supplements-----	3657
Bryan, L. W., forest plants in Hawaii, etc., check list-----	12161
Bryan, Mackay B., board-foot and cubic-foot volume computing equations for southeastern tree species-----	10243

# INDEX 1963

Entry	Entry
Bryant, D. A., scintillation counter telescope for charge and mass identification of primary cosmic rays.....	16377
Bryce, Mayo, fine arts education in Soviet Union.....	19100
Bryce Canyon National Park: general information.....	16431
ground water resources.....	5027
Bubble chambers, hazards in using liquid hydrogen.....	20966
Bucl, D. R.: spillway and sluices, Allegheny Dam, etc.....	10092
spillway for John Redmond Dam, Grand (Neosho) River, Kansas.....	2227
Buchwald, Laszlo J., relief.....	8034
Buckley, Donald H., influence of microstructural inclusions on friction and wear of nickel and iron in vacuum to 10 <sup>-9</sup> millimeter of mercury.....	11046
Buckley, John D., deterioration of calcia-stabilized zirconia.....	3154
Buckling, see Strains and stresses.	
Buckman, Robert E., 5-year progress report in growing stock density experiments in 60-year-old red pine.....	579
Budapest Technical University, chemical engineering achievements in past 15 years.....	8762
Buddington, A. F., regional geology of St. Lawrence County magnetite district, northwest Adirondacks, N.Y.....	2348
Budget Bureau: career staff to the President.....	1854
electronic data processing equipment use, hearing.....	17182
staff reports.....	7724-26
user charges policy, staff report.....	7726
Budget examiners, examination announcement.....	11663
Budget Joint Committee: create.....	
hearings.....	8112
report.....	8087
Budget of United States: deficit, solution through increased economic growth (remarks).....	13106
economic document.....	
hearings.....	13438
report.....	17241
estimates submitted by the President, 87th Congress, 2d session.....	2081
improving budget practice, progress, 1953-61.....	7725
legislative branch, etc., 1964, amendments.....	9838, 11762, 13674
1964.....	
budget in brief.....	1850
departmental edition.....	1851
appendix.....	1852
District of Columbia—amendments.....	17196, 18968
departmental edition.....	1853
document edition.....	2028
document edition.....	2027
appendix.....	2029
Government-wide general provision, proposal.....	13463
Budgets, see Budget of United States, also names of countries, etc., also names of departments, etc.	
Budgets (family and personal): Advisory Committee on Standard Budget Research, report.....	19805
helping families manage their finances.....	13168
Budworms, see Tobacco budworms.	
Bue, Conrad D., principal lakes of United States.....	19304
Buffalo, N.Y.: consumer expenditures and income, 1960, advance report.....	9050
electric facilities of area, map.....	516, 2266
income, education, and unemployment in neighborhoods.....	9067
occupational wage survey—departmental edition.....	9057
document edition.....	7840
Buffalo Lakes National Wildlife Refuge, general information.....	8278
Buffeting loads, see Load (mechanics).	
Bugla, James J., propellant required to maintain earth orbital vehicle in useful orbit between 2 specified altitude limits.....	16383
Builders: FHA fact sheet, how to do business with FHA.....	502
power machine, branch meeting, USSR.....	7103
Builder's Concrete Block Co., Inc., accident.....	14077
Building: college campus construction and rehabilitation, 1959-61.....	17382
construction (Chinese periodical), translations.....	10599
construction, public elementary and secondary schools, aims, 1959-60.....	6340
construction reports.....	
permits.....	15047
residential alterations and repairs.....	15048
FAA, safety in construction and alteration work, handbook.....	6393
Government construction contracts, amend small business act to exempt from SBA set-aside program, hearings.....	18930
hardware, engineer manual appendix 1, samples on file in D.C., change.....	430
home construction, publications, price list.....	3267
hospitals, engineer in construction sequence.....	7404
materials—Federal Item Identification guides for supply cataloging, supplements.....	3655
fiberglass, USSR study.....	8739
military construction, movable partitions, engineering manual.....	2211
mint facilities, additional, hearing.....	8093
new housing units, authorized by local permits.....	3530
new residential construction authorized in permit-issuing places.....	3540
sewage and water works construction, contract awards.....	13026
sewage treatment plant construction cost index.....	20111
specifications, military construction, Engineers Corps manual, change.....	17410
starting and managing small business.....	1491
United States AID missions, bibliography.....	15626
urban renewal rehabilitation, minimum property standards.....	13913
USSR—construction and building materials industry, translations.....	2596, 6719, 8508, 10705, 10726, 12606, 15920, 16134, 16192

# JANUARY-DECEMBER

	Entry
Building—Continued	
USSR—Continued	
design practices, need for improvement	19680
progress in military construction units	12530
see also Construction Industry—Installations (military).	
Building and loan associations, mutual deposit guarantee corporations, tax exemption, report...	13580
Building board mills:	
industry wage survey—departmental edition	1170
document edition	275
Building machinery:	
construction machinery and equipment industry outlook for 1963 and review of 1962	5978
construction machinery, current industrial reports	3575
current industrial reports, summary, 1962	15061
Federal item identification guides for supply cataloging, supplements	3652
little-used nontactical equipment held on Okinawa by military services, GAO review	12208
USSR industrial development, translations	670,
789, 860, 961, 1094, 2680, 2770, 6834, 8493, 8602, 8647, 8729, 8868, 10616, 10842, 14130, 15766, 15819, 15903, 17670, 17819, 19461, 19568.	
Building materials, industry, USSR, translations	19770
Building materials stores, see Stores.	
Building trades:	
skilled, employment in mid-1960	1187
union wages and hours	12804
Buildings:	
administrative facilities, Yards and Docks Bureau design manual, change	1603
dangerous or unsafe, District of Columbia, removal, amend act, report	18890
Foreign Service, additional appropriations—	
hearings	1995,
law	10010
reports—	17024
7955, 7962, 9992, 13598,	15237
heating, performance of Losch anthracite stoker	5477
historic preservation through urban renewal	9473
insanitary, in D.C., condemnations board to examine, etc., amend act, report	13782
load assumptions, engineering and design manual	4864
masonry construction, engineering and design manual	19142
prefabricated structures, Federal item identification guides for supply cataloging, supplements	3655
protective structures, shelter design series	11655,
13318	
Ramseyer rule print of proposed Foreign Service buildings legislation	18939
residential, dwelling units and room layout, Communist China	12449
safeguarding against termites	16739
structural design, emergency construction, engineering manual	19144
see also Apartment houses—Office buildings—Public buildings—also names of buildings.	
Bukk Mountains, microclimatic measurements on Great Meadow	17748

	Entry
Bulgaria:	
Academy of Sciences, Atomic Center research information	14353
Asen I. Khadzhilov, biologist, biographic information	10859
biographies, Todor D. Pavlov, and Lyubomir K. Krustanov	14356
claims, financial matters, agreement	18331
Communist Party, speeches and resolutions of 8th congress	945
East European legal journals, abstracts	756,
980, 2575, 5342, 8854, 10808, 14381, 17971.	
labor specialist physicians, instructions governing commissions	2486
Lyubomir Chakalov, biographic information	12405
medical science and education, planned development	2089
medical scientists, biographic information	8821
medicines, new, instructions governing testing	8468
Petur V. Gochev, biographic information	7101
physicians, Institute for Specialization and Advanced Study	5147
poisons, production, sale, storage, etc., regulations	5286
provincial press, summaries	2488,
2567, 2935, 5156, 6647, 6667, 6822, 6940, 8458, 8805, 9012, 10490, 10758, 12337, 12758, 14293, 14364, 15852, 15986, 18004, 19383, 19509, 19767.	
psychological sciences, status, tasks and prospects, conference	12440
public health services and organization, planned development	5209
railroads, new electric locomotives	15990
scientific and cultural cooperation, agreement with Rumania	10656
scientific workers, decree on specialization	10403
state committee for science and technical progress, regulation	16058
statistical yearbook, 1961	953
veterinary service, reorganization	5192
Bulgar, see Wheat.	
Bulkley, Robert J., Jr., at close quarters, PT boats in United States Navy	5653
Bulkley, Ross V., natural variations in spotting, hyoid teeth counts, and coloration of Yellowstone cutthroat trout	19243
Bulletins, see Farmers bulletins—also names of departments, etc., issuing bulletins—also subjects.	
Bullets, see Projectiles.	
Bullitt, John C., remarks, Mar. 19, 1963	7487
Bultman, J. D.: force-area study of mixed films of catalase and ovomucoid	12956
protein monolayers, structure and surface properties	18245
Bumpers, meteoroid, single aluminum, effectiveness	11061
Bunker Hill Air Force Base, and vicinity, ground-water geology and hydrology	19323
Bunsen flame, see Flames.	
Buoys:	
radio, seismo-acoustic, for studying earth's crustal structure in Indian Ocean area, USSR study—submarine-rescue radio transmitting buoy, electrical and radio design	11170
Burack, W. R., number of catecholamine storage granules in adrenal medulla	4414

Do not order from index; see indicated entry

Page 135

# INDEX 1963

Entry	Entry
Burbank, Paige B.: heat-transfer and pressure meas- urements on flat-face----- cylinder, etc.----- surface, etc.-----	5554 3124
Burdick, L. A., jr., ventilated clinging flow phenomenon-----	20206
Burdick, Yeng, relief-----	11930, 13407, 13480
Burdock quadrangle, S. Dak., ge- ology-----	10275
Burgess, David, structure and propa- gation of turbulent Bunsen flames-----	1197
Burgess, Dent L., soil survey of Roger Mills County, Okla.-----	18317
Burggraf, O. R., axisymmetric, rotat- ing, pressurized filamentary structures-----	11081
Burial: veterans----- allowances, amend law, report----- pay expenses when discharge changed from dishonorable----- law----- reports-----	18868 7822 4731, 6276
Burk, Sanger M., jr., deployment, dynamic stability, etc. of 1/2- scale dynamic radio-controlled large booster and parawing, free-flight investigation-----	18151
Burke, Harold J., relief-----	17099
Burke, John: statue, acceptance, print proceed- ings report----- statue, place in Statuary Hall, re- ports-----	13529 8085, 9871, 13528
Burlap, treated burlap bags, use for shipping wool, appraisal-----	12048
Burley tobacco, <i>see</i> Tobacco.	
Burlington, Iowa, <i>see</i> Iowa Ordnance Plant Reservation.	
Burlington, N.J., bridge construction across Delaware River, use of funds, hearing-----	300
Burlington, Vt.: Municipal Airport, weather observa- tions, hourly decennial census, occupational wage survey----- departmental edition----- document edition-----	9502 12797 11741
Burlington County Bridge Commis- sion, use of funds acquired by owners of bridges across Dela- ware River, hearing-----	300
Burma: agricultural commodities agree- ment----- fact sheet----- import tariff system----- labor conditions-----	3348 16373 5077 19797
Burmeister, Harry L., mining and milling methods and costs, East- ern Magnesite Co., etc-----	3057
Burner fuel oil, <i>see</i> Fuel oil.	
Burners, <i>see</i> Oil burners.	
Burnett, Earle S., method of compres- sibility determinations, appli- cation to multiphase fluid mix- tures-----	14524
Burnett, W. M., nuclear theory refer- ence book, 1957-58-----	11590
Burnham, W. L., hydrogeologic recon- naissance of San Nicolas Island, California-----	6562
Burning of land: grasses and forbs for seeding chaparral burns, comparison----- south Florida range, effect of burning-----	17492 10244
Burns, C. D., total thickness, etc., for flexible pavements to be sub- jected to channelized traffic-----	2229
Burns, Rowland E., ascent from lunar surface-----	12859
Burns and scalds: anesthesia for painful changes of dressings, USSR study----- autoimmunization factors of body in burns, USSR study----- biochemical changes, USSR study----- biological effects of thermal injury, USSR study----- burn injury, USSR study----- central nervous system changes, USSR study----- chemical burns of stomach and their treatment, USSR study----- deep thermal burns, surgical treat- ment, USSR study----- energy metabolism changes, USSR study----- irradiated rabbits, histological changes in skin following homo- plasty, USSR study----- model of burns in rabbits with iso- lated heating of skin, USSR study----- surgery in burn cases, USSR studies----- surgical treatment of deep thermal burns, USSR study----- thermal and electric burns, USSR study----- thermal burns, cadaverous bone mar- row and serological response to, USSR study----- thermal skin burns in children, am- niotic membranes in treatment, USSR study----- thyroid hormone role in healing burns, USSR study----- treating burns and burn complica- tions, USSR study----- treatment of burns, polychlorviuyl films, USSR study-----	18011 17891 15932 19472 10401 17983 12496 893 19537 2539 17892 17883 2499 5166 8993 15739 9016 951 19506
Burns Creek Dam and Reservoir: construction project, hearings----- engineer report----- departmental edition----- document edition-----	17183 4837 4763
Burns Waterway, Ind.: harbor improvement, engineer re- port----- departmental edition----- document edition-----	20650 20455
Burroughs, L. C., panel presentation, Dec. 11, 1962-----	1420
Burson, Z. G., fallout protection of structures in Los Angeles area-----	5028
Burundi, import tariff system-----	6599
Bushnell, David, history of Office of Research Analyses-----	16782
Busia, K. A., testimony-----	13816
Business: aids, overseas investment----- aids to expansion, Business and De- fense Services Administration (remarks)----- American firms, sources of informa- tion for international buyers----- area redevelopment bulletin----- business and government, partners in marketing in Free World (address)----- business report of Department of Commerce----- census, 1958----- final publications and contents----- Puerto Rico----- wholesale trade subject reports----- census publications, price list----- COBOL, programming language for computers extended specifica- tions----- comprehensive planning, bibliog- raphy----- conditions, national summary-----	8424 11683 17562 3462 7806 4509-10 4573 13303 16877 9334 2113 1855 3940



# JANUARY-DECEMBER

	Entry
<b>Business—Continued</b>	
county business patterns— employment, taxable payrolls, etc.—	
announcement and order form—	11604
Mountain States—	15054
New England States—	11614
OASDI program—	13281-286, 15049-55, 16889, 18669-678
United States summary—	16889
credit and assistance, code of Fed- eral regulations—	10166
cycle developments, report—	3487
data gap, value of economic infor- mation (address)—	13345
District of Columbia, business cor- poration act, amend—	
law—	17041
reports—	9859, 13735
doing business in—	
Greece, report of 1962 U.S. Trade and Investment Development Mission—	5057
Japan, report of 1962 U.S. Ma- chinery Trade Mission—	5058
Spain, report of 1962 U.S. Ma- chinery Trade Mission—	5059
doing business with Federal Gov- ernment, guide—	531, 8326
East German economic planning, new system, guidelines—	16097
enterprise statistics, 1958—	9727
announcement and order form—	9710
establishing in—	
Australia—	19355
Austria—	12256
Belgium—	17557
Colombia—	17555
Ethiopia—	5081
Greece—	2392
Kuwait—	10338
Lebanon—	5080
Libya—	19356
Pakistan—	2418
Peru—	2421
Thailand—	6605
ethics—	
challenge to leaders (address)—	20391
challenges (address)—	13342
importance (address)—	1958
expenditures, deductibility, testi- mony of commissioner of internal revenue—	8104
FHA fact sheet, message to build- ers—	502
growth, challenges and obligations (address)—	9777
guide to current business data—	3759
home businesses, bibliography—	11272, 21105
income tax returns, statistics, 1960-61—	2376, 14067
indexes—	3488
information and assistance avail- able at Cooperative Offices, Commerce Dept.—	7807
international—	
balance of payments of U.S. 1870-1961, statistical supple- ment—	4559
publications, checklist—	2380, 19352
library, basic reference sources, bibliography—	3325
management aids for small manu- facturers—	7426
moral strength in business (ad- dress)—	6049
new frontiers in Government-bus- iness relationships (address)—	18751
news reports—	3489
overseas business reports—	2383-2400, 5061-90, 6589-6621, 8378-8420, 10330-344, 12253-257, 15047- 652, 17554-561, 19355-358, 20756-757.

	Entry
<b>Business—Continued</b>	
planning failure, chemical machine building plant, USSR study—	10494
profits and Government programs (abtracts of remarks)—	9776
programs to improve profits and in- vestment opportunities (ad- dress)—	13340
publications, price list—	5682
SBA's role in area redevelopment—	9381
seasonal adjustment, Census Bu- reau's methods, tests and re- visions—	16906
service check list, weekly—	3490
small business—	
act, amend to exempt Govern- ment construction contracts from SBA set-aside program hearings—	13793, 18930
act, amend to increase amount for loans, hearings—	12907
act, text as amended—	12029
advertising and growth opportu- nities in television and radio report—	2045
AID circular—	3433
AID memo—	3434
and union-wide bargaining—	1470
bibliographies—	7427, 9385, 11272-275, 14687-689, 18307-309, 20128, 21105-107
bulletins—	1488-89, 3323-25, 11276-277
businessman's stake in Presi- dent's tax proposals (re- marks)—	11362
concerns interested in performing research and development, list—	11270
construction of pollution treat- ment works, assistance, hear- ings—	13824
diary industry problems, report—	2039
education for leadership—	1448
electronics industry management problems—	1486
enterprises of Negroes in Ten- nessee—	1464
export marketing, manual—	13042
Federal tax dates for small plants—	5716
firms, accounting practices—	1483
foreign trade opportunities—	
hearings—	20506
report—	2042
Government procurement, report—	2036
Government publications, list—	20085
impact of dual distribution and related vertical integration, hearings—	15333
insurance management in retail firms—	1481
investment act of 1958, amend, hearings—	12007, 19045
investment act amendments of 1962, hearings—	13644
investment act text, addenda—	12030
investment companies—	
conflict of interest problems, hearing—	19045
licensed by SBA—	11278, 20129
operations, report—	9977
joint advertising by retailers, FTC advisory opinion, hear- ing—	9049
loans, limited, participation plan—	20126
loans through local development companies, communities bene- fited, list—	11267
management aids for small manu- facturers—	1444-45, 5716
annual compilation—	20127
management research summa- ries—	1446-86
list—	11268

# INDEX 1963

	Entry		Entry
Business—Continued		Business and Defense Services Ad-	
bulletins—continued		ministration—Continued	
management series	7428	releases BD series	4039
manufacturing firms in New		reorganization (address)	200
Hampshire	1446	Business and public administration—	
New Hampshire development	1465	BPA notes	363
patent policies, economic aspects,		notes	3486
hearings	12028	Business consolidations:	
pattern bargaining	1450	applications to merge banks or to	
petroleum imports problems, re-		form or expand bank holding	
port	2041	company	3459
pooling for defense production,		merger of Eastern Air Lines and	
and research and development	11279	American Airlines, proposal,	
poultry industry problems, re-		staff report	2055
port	2040	mergers and superconcentration,	
problems	1454	acquisitions of largest indus-	
problems and opportunities con-		trial and merchandising firms,	
fronting Negroes	6050	staff report	305
problems, investigations—		role of merger in progressive trans-	
authorization, report	6269	portation policy (remarks)	18756
expenses, report	2043	see also Banks and banking.	
products list circular	4111	Business Economics Office:	
providing management talent	1458	news reports	3489
research reports, survey	11280	press releases	4040
retail, operating costs and ratios,		Business education:	
bibliography	11273	automation, implications for (pa-	
Rocky Mountain area, problems	1473	per)	1182
SBA loans, policies, etc.	11271	business and public administra-	
SBA publications on programs		tion—	
and services	13043	BPA notes	363
SBA's principal lending pro-		notes	3486
grams, key features	9382	teachers, increases in courses and	
small manufacturing firms, equity		graduates, 1955-61	15435
and long-term financing,		see also Distributive education.	
sources	1477	Business Equipment Manufacturers	
small marketers aids	1490, 5718	Association electronic data-	
specialists, Defense Dept., list	10045	processing equipment use, hear-	
starting and managing series	1491,	ing	15329
	3326, 14690	Business men:	
starting and managing small		Defense Dept. small business spe-	
building business	1491	cialists designated to help,	
structure in Alabama	1460	list	10045
success and failure cases	1468	doing business in—	
suggested management guides	1492	Greece, report of 1962 U.S. Trade	
suppliers and large buyers, survey		and Investment Development	
of relations	1459	Mission	5057
suppliers in changing market	1478	Japan, report of 1962 U.S. Ma-	
tax guide, 1963	2377	chinery Trade Mission	5058
tax proposals of administration,		Spain, report of 1962 U.S. Ma-	
impact—		chinery Trade Mission	5059
hearings	13825	how to do business with Defense	
report	17242	Supply Agency	343
technical aids for small manu-		Income tax deductions for travel,	
facturers	7429	entertainment, and gift ex-	
use of outside information	1466	penses, questions and an-	
use of trade association pro-		swers	15643
grams	1484	industry and opportunity in Italy,	
vocational rehabilitation oppor-		report of 1962 U.S. Industrial	
tunities	16644	Automation Mission	5060
wage hour law in small firms	5718	small businessman's stake in Pres-	
what kind of money do you		ident's tax proposals (re-	
need?	7426	marks)	11362
wholesale, operating costs and		Business recession Federal fiscal be-	
ratios, bibliography	11275	havior, 1957-58	7724
workshops for prospective own-		Businessmen, see Business men.	
ers, announcement	21103	Busoni, Raffaello relief of estate	13497
statistics—		Butadiene, industry, water require-	
Federal reserve chart book	3672	ments	12231
historical supplement	20677	Butenes, butene-1, absorption and	
weekly	3491	photoionization coefficients in	
survey of current business—		vacuum ultraviolet	19898
monthly	4223	Butler, G. G., milk production, dis-	
weekly supplement	3491	position, and income, 1961-	
U.S., sales frontier for Africa, Inter-		62	11338
national commerce, supp-	8375	Butler County, Kans., waterflood-	
see also Competition—Mail-order		ing projects and pressure-main-	
business—Retail trade		tenance project, 1963	12829
Business analyst, curriculum for com-	6332	Butsko, J., recirculation principle for	
puter programmers		ground effect machines	7484
Business and Defense Services Ad-		Butson, Keith, climate of Florida	3399
ministration:		Butt, B. A., laboratory tests of candi-	
aids to business expansion (re-		date insecticides and acaric-	
marks)	11683	ides at Brownsville, Tex.,	
ER series	146, 1859-62,	1956-63	18392
	4514-15, 5963-82, 7732-33		

# JANUARY-DECEMBER

	Entry
Butter:	
futures trading and open con-	
tracts-----	3749
New York City, wholesale market	
facilities-----	1701
Buttermilk dairy plants processing,	
layouts and operating criteria	
for automation-----	16746
Buttes Dam and Reservoir, Interior	
Dept. report-----	17069
Butz, J. S., Jr., weather in space-----	19947
Butze, Helmut F., chemical regenera-	
tion of surfaces in thermionic	
diodes-----	16392
Buying, see Purchasing.	
Byerly, John R., relationship between	
watershed geology and beach	
radioactivity-----	19132
Bykovskiy, Valeriy, new cosmic tan-	
dem, USSR study-----	20905
Byrd, Huger S., soil survey, Oconee	
County, S.C.-----	13053

## C

C.A.B., see Civil Aeronautics Board.	
C. & B. Livestock Co., Inc.:	
and Oregon, land exchange be-	
tween-----	
law-----	18773
reports-----	12002,
C.C.C., see Commodity Credit Cor-	15294
poration.	
C.C.L., see Coating and Chemical Lab-	
oratory.	
C.F.S. series-----	541-544,
2285, 3449, 3493, 3686-87,	
3712, 3742, 3755, 3879, 3881,	
3887-88, 3897, 3903-4, 3957,	
3963, 3971, 3986, 4156, 4191,	
4197, 4233, 4280, 4310, 4935-39,	
6449-50, 8264-69, 10185-188,	
12130-135, 13946-951, 15515-	
517, 17444-445, 19222-224,	
20683-686.	
C.I.S.C., see International Federation	
of Christian Trade Unions.	
C.R.P.L., see Central Radio Propaga-	
tion Laboratory.	
C.R.R.E.L., see Cold Regions Research	
and Engineering Laboratory.	
C.S.E.S.S. series-----	10025-26
CA series-----	9547, 13157
CAB, see Civil Aeronautics Board.	
Cabbage:	
fresh, from grower to retailer, gen-	
eral information-----	33
insects, control in home gardens--	7506
Cabigas, Osmundo, relief-----	11776
Cabin, frame, slab-on-grade construc-	
tion-----	7577
Cables:	
Federal item identification guides	
for supply cataloging, supplе-	
ments-----	3654
tension, of parawing and spacecraft	
combination, low-speed investiga-	
tion-----	14584
see also Electric cables—Submarine	
cables.	
Cacace, Alessandro A. R., relief-----	18983
Cacao, foreign agriculture circulars--	3720
Cache National Forest:	
extend boundaries-----	
law-----	17029
reports-----	13720, 15252
Cache Valley, Utah, geology-----	2345
Cachoeira do Campo quadrangle, Brazil,	
geology and ore deposits-----	602
Caddis flies, Neotropical region, Rhy-	
acophyllidae and Glossosoma-	
tidae (Trichoptera), studies-----	9235
Cadets, see Air Force Academy,	
Colo.—Coast Guard—Military	
Academy, West Point.	

	Entry
Cadmium:	
disposal from national stockpile--	
hearings-----	6188, 6190
law-----	7827
reports-----	6166, 6274
mineral industry survey, quarterly-	
minerals yearbook chapter-----	14494
plating, effect on stressed steels at	
elevated temperatures-----	5893
Cady, W. M., bedrock geology and	
asbestos deposits of upper Mis-	
sissquoi Valley and vicinity,	
Vt-----	19292
Cafferty, Michael J., address, Nov. 1,	
1963-----	20371
Cages, insect and plant research,	
design-----	9539
Cagle, Caroline H., interest rates on	
time deposits, mid-Feb. 1963--	13935
Cain, Stephen M., cerebral excess lac-	
tate production during hyper-	
ventilation of anesthetized	
dogs-----	80
Calisson disease, see Aerobobolism.	
Cajamarca Department, Peru, Saya-	
pullu Mine area, uranium re-	
connaissance-----	16854
Calamity Peak, geology of area-----	5018
Calandl, Anthony J., relief-----	11787
Calanus, see Copepods.	
Calaveras River:	
Mormon Slough, flood control, en-	
gineer report-----	4866
departmental edition-----	4686
Calcasieu River and Pass:	
salt water barrier system, con-	
struct, engineer report-----	4838
departmental edition-----	4688
document edition-----	
Calcia, see Calcium oxide.	
Calcite:	
infrared studies of oleic acid ad-	
sorption-----	9130
P-T univariant equilibria of re-	
action forsterite + calcite-mon-	
tcellite + periclase + CO <sub>2</sub> , ex-	
perimental studies on Bowen's	
decarbonation series, II-----	16385
Calcium:	
absorption during alterations in	
environmental temperature-----	18484
calcium and calcium compounds,	
minerals yearbook chapter-----	16319
solid solubility in magnesium,	
effect of indium-----	5496
Calcium carbonates, environment of	
deposition west of Andros Is-	
land, Bahamas-----	604
Calcium molybdate, heats and free	
energies of formation-----	3098
Calcium monomolybdate, low tem-	
perature heat capacities and	
entropies at 298.15° K-----	3101
Calcium oxide, stabilized zirconia, de-	
terioration-----	3154
Calcium tungstate, heats and free	
energies of formation-----	3098
Calculating devices, nuclear bomb	
effects computer, including	
slide-rule design and curve fits	
for weapons effects-----	5929
Calculating machine paper, tape, Fed-	
eral standard-----	19211
Calculating machines, computing, cur-	
rent industrial reports-----	11626, 16891
see also Electronic computers.	
Calculation of ephemerides from ini-	
tial values-----	1277
Calculations, see Numerical calcula-	
tions.	
Calculators, veterans benefits, 1962--	308

# INDEX 1963

	Entry
Caldwell, Melba C., larval and juvenile fishes of family Mullidae.....	2287
Caldwell, Oliver J., liberal arts in revolutionary world.....	10073
Calendar of events in areas administered by National Park Service.....	18201
Calendar of events in Library of Congress (periodical).....	7181
Calendar pads, Federal standard.....	12127
Calendar stands, Federal standard.....	12127
Calendars (of business), see Court of Claims—House of Representatives.	
Calhoun, John B., ecology and sociology of Norway rat.....	21032
Calhoun, Willis A., flotation of siegenite in complex sulfide tail middling from southeast Missouri.....	5475
Calhoun County, S.C., soil survey report.....	20140
Calibration:	
aircraft static-pressure systems by ground-camera and ground-radar methods, test program.....	18163
BUWEPS-BUSHIPS program—engineering circulars.....	3236, 9276
procedures at Standards Laboratory, Naval Weapons Bureau.....	9281-85, 9288, 16466-469
electronic counter and pulse height analyzer for plotting erythrocyte volume spectra.....	20337
gravity model for any size urban area.....	14679
impedance pneumograph, thoracic cage measurements.....	16801
infrasonic hydrophones by null method.....	8801
low-pressure mercury arc for ultraviolet calibration.....	21023
Navy program—technical manual series.....	3239, 9290-9300, 14636, 18256-262, 20002-9, 21060-61.
technique at Standards Laboratory, Naval Weapons Bureau.....	9286-87
neutron moisture meter curves, method for determining slopes.....	8302
potentiometers, practical method.....	9214
semiconductor detector pulse-height response to protons.....	11514
tests of pre-heated hypersonic wind tunnel.....	1275
viscometers, calibrating liquids, etc.....	3174
volt-ampere converters.....	11102
volume ration system for calibration of thermal-conductivity vacuum gage in range of $10^{-4}$ to 1 Torr lower limits.....	12865
X-15 flight data for pressure-type airspeed-altitude systems.....	7291
Calibrators, hydrophone.....	21058
California:	
and nation, problems of abundance (address).....	14854
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics.....	5989
Arizona v., Colorado River basin water rights controversy, Supreme Court opinion.....	11920
beryllium investigations, 1959-62.....	9114
chemicals for brush control in reforestation.....	6495
climatological data.....	3517
coast pilot, supplement.....	6038
coastal dunes, reconnaissance.....	6357

	Entry
California—Continued	
Communist Party, southern District, united front technique—hearings.....	17188
report.....	15269
cone crop.....	6499, 19263
county business patterns, activities covered by OASDI program.....	15055, 18678
delinquency research projects, experiments with alternates to institutionalization.....	15091
fire weather brings near-record losses, 1961.....	6494
fish hatcheries, mycobacteria in returning salmonid fishes.....	19244
forest tree seed lot information, system for recording.....	17486
health survey, methodology.....	13024
landings, fishery products.....	3493
littoral studies near San Francisco using tracer techniques.....	63359
mineral industry, minerals year-book chapter.....	3060
mineral rights conveyance to, report.....	15281
narcotics and dangerous drugs, abuse, hearings.....	8123
national forest campgrounds, evaluation of conditions and needs for research.....	17483
national forests, timber production, possible impact of recreation development.....	6501
peach production, forecast.....	16622
population 1960, characteristics.....	18647
precipitation data, hourly.....	3771
public school finance program, 1961-62.....	6338
recreational areas, judging hazard from native trees, guide for professional foresters.....	15583
redevelopment area 5B, statistical profile.....	11694, 15129
rice stocks and movement report.....	3494
secondary nonferrous metals industry.....	5471
snow survey measurements, 1910-61.....	1502
southern—	
geologic investigations of deserts (series).....	10276
outdoor recreation facilities demand, impact of growth of Los Angeles, 1976 and 2000.....	3249
Ventura area of coast, cooperative beach erosion control study, engineer report.....	405
departmental edition.....	229
stored grain frogodermis and dermestids commonly encountered, illustrated key to species.....	7550
storms—	
hydrologically critical, meteorology.....	7515
3-dimensional wind flow and resulting precipitation in northern area.....	20246
U.S. oil and gas lease no. Sacramento G37552-C, reinstate and validate, report.....	15279
women workers, 1960.....	3408
wood charcoal production, 1961.....	15557
ZIP code directory.....	20029
see also Clear Lake National Wildlife Refuge—Los Angeles-San Gabriel River Basin project—Tule Lake National Wildlife Refuge.	
California Forest and Range Experiment Station, see Pacific Southwest Forest and Range Experiment Station.	

# JANUARY-DECEMBER

	Entry		Entry
California red fir, <i>see</i> Fir.		Cameron, Donald B.:	
California red scale, screening tests—	18394	acquisition of probabilistic discrimination between subsequent alternative events—	9614
Caloric nystagmus, <i>see</i> Nystagmus.		post-discrimination gradients around stimuli with differential rates of occurrence in discrete response task—	4396
Calorimeters:		Cameron, Winifred S., effect of refraction on settling sun as seen from space in theory and observation—	12862
construction for measurement of absorbed dose—	1334	Cameron County, Tex., truck crop production practices—	15415
electrical, integrating device—	11159	Cameroon, <i>see</i> Cameroun.	
measurement of heat transfer in free flight by use of catcher calorimeter—	14574	Cameroun:	
purity measurement using benzene IUPAC samples—	16343	investment law—	5074
Calumet Harbor and River:		Peace Corps program, agreement—	1540
improvements, engineer report—		sending gift packages to—	2402
departmental edition—	2199	Cammla, Generoso B., relief—	17085
document edition—	2005	Camp, Dolph, guidance workers certification requirements—	15431
Calumet Skyway, <i>see</i> Chicago, Ill.		Camp, F. W., determination of diffusivity and solubility in 2 phase systems—	4481
Calves:		Camp grounds, <i>see</i> Camps.	
calf crops—	9439, 18338	Campaign expenditures, legislative recommendations of President's Commission on Campaign Costs—	337
on feed, Arizona and California—	3501	Campaign Expenditures 1962, Special Committee to Investigate, House, report—	2044
veal, pooling, improved marketing through grading and commingling—	16747	Campaigns (political), <i>see</i> Elections.	
weight trends on mountain summer range—	10222	Campbell, Arthur B., geology and mineral deposits of Twin Crags quadrangle, Idaho—	6550
Camanche Reservoir:		Campbell, Edward C., relief—	7890
Mokelumne River flood control, engineer report—		Campbell, J. Duncan, American military insignia, 1800-51—	14607
departmental edition—	401	Campbell, John D., Oklahoma cotton cooperatives—	6380
document edition—	224	Campbell, R. S., selected bibliography on southern range management—	20709
Camas National Wildlife Refuge, birds—	19240	Campbell, Robert A.:	
Cambarlincola, <i>see</i> Annelids.		grading features in southern pine logs and trees—	8304
Cambela, Lillian, Project SIAT (synthesis of impact acceleration technology)—	18354	overruns, southern pine logs—	6523
Camber (aircraft):		southern pine lumber grade yields—	6522
bending-moment distribution of cambered-span wing systems having minimum induced drag—	7248	Campbell, William J., thermal expansion of magnesium oxide, etc.—	3076
effects of camber and twist on aerodynamic characteristics of parawings—	3118	Campgrounds, <i>see</i> Camps.	
highly swept arrow wings employing, off-design aerodynamic characteristics—	7277	Camping:	
wing inboard trailing-edge, of model at high subsonic speeds, aerodynamic effects—	12879	backpacking in national forest wilderness, a family adventure—	16753
Cambodia:		facilities in areas administered by National Park Service—	12921
fact sheet—	14706	Camps:	
gazetteer, official standard names—	17519	campgrounds for many tastes—	19268
import tariff system—	6621	evaluating ecological trends on campgrounds—	19262
relations with its neighbors, analysis by Norodom Sihanouk—	8896	national forest campgrounds and picnic areas, California, evaluation of conditions and needs for research—	17483
7 years of reconstruction—	12457	southern Appalachian campgrounds, recreation impact—	6525
Soviet-supported hospital (address)—	20789	USSR, motor tourist guidebook—	8719
Camden, N.J., relocation of elderly people, hearings—	6287	<i>see also</i> names of camps.	
Camellias, growing—	28	Can you talk the language of aerospace age—	13208
Camelsback Reservoir:		Canada:	
Gila River flood control, engineer report—		Alouette, 1st satellite—	3110
departmental edition—	2197	chicken meat production tests—	9542
document edition—	2070	flight information publication—	
Cameras:		planning, air traffic control procedures—	3702
Baker-Nunn, for satellite tracking—	11485	planning data—	3697
canopy camera, description, operation, etc—	4991	import tariff system—	5087
ground-camera method for calibrations of aircraft static-pressure systems—	18163	lights list and other marine aids, Great Lakes—	6041
television, automatic picture transmission (APT) system for meteorological satellites—	20985		
Cameron, A.G.W.:			
collapse phase of early solar evolution—	3159		
formation of sun and planets—	21015		
origin of atmospheric xenon—	5607		



# INDEX 1963

	Entry
Canada—Continued	
meteorological satellite system, agreement	9418
North Pacific fisheries convention, amendments	16607
northern, sailing directions, change	7345
pilotage services on Great Lakes and St. Lawrence River, agreement	11320
population trends	11909
pulpwood imports drop to all-time low while Lake States production increases, 1962	15570
radio frequencies above 30 megacycles per second, agreement	5729
sending gift packages to	2403
technical vanillin, determination of no injury or likelihood thereof to U.S. industry	9459
tobacco, production and trade, 1962 survey	10207
Canadian Pacific Air Lines, Ltd., accident	16920
Canadian River project, general information	21100
Canal Zone:	
citizenship certificates, authorize issuance, report	9870
code, amend—	
hearings	9944
report	11824
code, text	2268
Federal wage and hour law, application	9485
insurance business report, 1962	11602
mineral industry, minerals yearbook chapter	19852
Panama Canal, code of Federal regulations	4920
population, 1960, characteristics	20349
Canal Zone Government:	
annual report, 1962—	
departmental edition	11603
document edition	11765
audit report, 1962	11757
budget, 1964, amendments	13463
tort claims, expand authority to settle, report	11823
Canals, irrigation, linings, lower cost program	16547
Canaveral Harbor:	
proposed improvements, engineer report—	
departmental edition	2182
document edition	2074
Cancer:	
breast	20097
carcinogenesis abstracts	12983
cells, antibiotic cruzin reaction, USSR study	19626
changes of nervous system, Soviet book review	2460
chemotherapy reports (periodical)	3495
construction of research facilities, 1962 funds, Public Health Service	11109
control, socio-hygienic problems, USSR study	656
cutaneous, biology, conference, Apr. 6-11, 1962	7315
decancerogenization of products of bituminous shale treatment, USSR study	2557
film guide, 1963	16492
gastric, patients, oncological help, USSR translations	6792
hair follicles, cyclic changes and their role in experimental carcinogenesis, USSR study	9015
lung—	
and air pollution	1416
familial aggregation among hospital patients	12991

	Entry
Cancer—Continued	
lung—continued	
morbidity in relation to air pollution, USSR study	5396
pulmonary, lobectomy, USSR study	16118
malignant neoplasms, disease and death rate of USSR population	830
manual for public health nurses	20091
metastatic brain tumors, mechanism governing massive changes in bioelectric activity, USSR study	812
radiation as possible cause of carcinogenesis, USSR study	10832
related to suicides in VA hospital patients	9478
USSR studies	16150
uterus	20099
virology and immunology (USSR periodical)	6946
see also Oncology.	
Cancer Institute, see National Cancer Institute.	
Candela:	
as unit of luminous intensity, establish—	
hearing	18958
reports	13754, 18903
Candlepower, see Candela.	
Candler, Marguerite L., laboratory techniques in control of anticoagulant therapy, manual for clinical laboratory personnel	16511
Candy, see Confectionery.	
Canine corps, see Dogs.	
Canini, Benjamin A., relief	11925, 13489, 16979
Canned foods:	
botulinum pathogen problem in canning industry, USSR study	2721
fruit and vegetable canning industry, outlook for 1963 and review of 1962	4514
report (periodical)	3496
see also names of classes of foods canned.	
Canneries, botulinum pathogen problem in canning industry, USSR study	2721
Canning and preserving:	
home, helpful Government publications, list	11213
industry wage structure, Federal wage-hour law application	20229
sweeteners used by food processing industries	351
see also names of commodities canned or preserved.	
Cannon's procedure, House of Representatives	9829
Canopies (aircraft):	
force and pressure measurements on canopy-fuselage configurations	5531
helicopter, plastic, reduction of reflectivity from transparent materials, techniques, evaluation	2118
Canopus (United States ship):	
transfer right, etc., to Philippine Government, agreement	1537
Canopy camera	4991
Cans:	
aluminum, procurement without adequate pricing data by—	
E. I. du Pont de Nemours of America from Aluminum Company of America under AEC contract, GAO report	14003
General Electric Company from Aluminum Company of America under AEC contracts, GAO review	12211

# JANUARY-DECEMBER

	Entry		Entry
Cans—Continued		Capitol Reef National Monument, general information	18202
metal—		Capitol Theater, use as municipal theater in D.C., report	17121
current industrial reports-----	3574, 13294	Caplan, Mortimer M.: new depreciation guidelines, realistic and flexible-----	1445
industry, outlook for 1963 and review of 1962-----	4541	testimony-----	8104
Canton, China, general information--	900, 8645	Capparaceae, <i>see</i> Capparidaceae	
Canton, Ohio:		Capparidaceae, specimens in Florida Keys-----	21041
occupational wage survey--		Capps, Hahn W., keys for identification of some lepidopterous larvae frequently intercepted at quarantine-----	13155
departmental edition-----	14471	Caps:	
document edition-----	13452	aluminum, procurement without adequate pricing data by--	
Canton Island:		E. I. du Pont de Nemours of America from Aluminum Company of America under AEC contract, GAO report-----	14003
aircraft accident-----	7772	General Electric Company from Aluminum Company of America under AEC contracts, GAO review-----	12211
airport, Federal aviation regulation-----	2252	Capstan for deep sea holists-----	16462
Canyonlands National Park:		Captive European nations-----	9880, 18940
establish--		Carbides:	
hearing-----	12021	iron catalysts in Fischer-Tropsch synthesis-----	19824
report-----	15354	of 65 elements, thermodynamic properties-----	16318
Capacitors:		<i>see also</i> Boron carbide—Chromium carbide—Plutonium carbide—Silicon carbide—Titanium carbide—Tungsten carbide—Uranium carbide—Vanadium carbide	
metallized teflon, subminiature, 200° C-----	9601	Carbohydrates:	
manufacturing methods, final report-----	18449	content of some mass Black Sea planktonic algae grown in cultures-----	17738
Cape Cod National Seashore, general information-----	16432	liver constituents in rats fed high-carbohydrate diets-----	11499
Cape Fear River Basin:		values and body temperature in normal and endotoxin poisoned mice exposed to environmental temperatures-----	1754
flood control, construction of New Hope Dam, etc., hearings----	10024, 13667	Carbon:	
flood control, engineer report--		compounds, chemistry, classification bulletin-----	20017
departmental edition-----	402	configuration interaction in atom--	18174
document edition-----	246	electrode-fuel cell properties, experimental-----	4393
Cape Hatteras, N.C. to Brunswick, Ga., coastal warning facilities chart-----	11382	high-energy neutron-induced changes-----	4477
Cape Hatteras National Seashore Recreational Area, general information-----	7325	resistors for cryogenic liquid level measurement-----	21030
Cape Henry to Key West, coast pilot, supplement-----	6037	saturated, fatty acids detergency-----	12963
Cape jasmine, <i>see</i> Gardenias		Carbon black:	
Cape Romain National Wildlife Refuge, birds-----	15526	mineral industry survey, monthly--	3497
Cape Spencer to Arctic Ocean, coast pilot, supplement-----	4637	minerals yearbook chapter-----	18066
Capehard housing projects, <i>see</i> Housing		Carbon County, Pa., soil survey-----	1505
Capital:		Carbon dioxide:	
basics of kolkhozes and sovkhoses, USSR study-----	8454	administration of carbon dioxide with oxygen at 59,000 feet altitude, effects on brain oxygenation, etc-----	69
USSR light industry enterprises--	8712	carbon dioxide and nitrogen mixtures behind normal shock wave, thermodynamic properties-----	7257
working of kolkhozes, USSR study--	19603	high concentrations, effects on urinary excretion of steroids and catecholamines-----	18505
<i>see also</i> Investments		nonequilibrium flow field behind normal shock waves-----	14571
Capital of United States:		Carbon isotopes:	
airports, FAA regulations-----	4883, 17424	C-14, use in hydrobiological research, USSR study-----	16248
places of historic interest, factual information-----	15341	radioactive, role in mechanism of photosynthesis, Rumanian studies-----	8997
transit program for region, development, hearings-----	17167		
transportation in National Capital region, finance and organization recommendations-----	1335		
Capitalism:			
countries, automation of production and deterioration of health of workers, USSR study-----	5400		
quantitative relationship between 2 main kinds of social production, Communist Chinese study-----	816		
Capitol:			
factual information-----	15341		
grounds, power-activated tools employing explosives, permit use, hearing-----	2057		
history, pictorial story-----	18795		
our Capitol, print as Senate document, reports-----	6281, 7935		
planning a visit to Nation's capital?-----	11219		
Capitol Reef area, Utah, geology-----	20732		

# INDEX 1963

Entry	Entry
Carbon monoxide: light-induced, in closed environ- ments of space vehicles..... 18506	Carl amici, informazioni sulle norme sanitarie per coloro che si recano negli Stati Uniti..... 7396
thermodynamic calculations of carbon monoxide-air detonation parameters for initial pres- sures from 1 to 100 atmos- pheres..... 1318, 11043	Caribbean area: aviation, scheduled services by U.S. and Trinidad and Tobago air- lines..... 3357 climatological data..... 3517
Carbon paper, in-office reproduction methods using GSA supplies..... 539	Communist threat to U.S., hearings, print additional copies, report..... 3357
Carbon tetrachloride, hepatotoxicity, current concepts..... 7628	demographic position..... 13663
Carbonates: bicarbonate excretion during hypo- thermia..... 4415	flight information publication, en- route..... 3689
mineralogy, Eniwetok Atoll..... 19308	health information for travel in..... 16500
rocks, uranium in..... 17529	Caribbean forester (periodical)..... 3498
see also Calcium carbonates— Potassium carbonates.	Carley, Verna A., African women edu- cators project report..... 14072
Carbonic anhydrase, inhibition effect in exercising rats..... 14921	Carload waybill statistics, see Rail- roads.
Carbonitriles, iron catalysts in Fisch- er-Tropsch synthesis..... 19824	Carlson, Q. C., Dynapak extrusion of I & E fuel elements, etc..... 18565
Carbonization. coal— Elk, Clarion, Jefferson, Clearfield, and Centre Counties, Pa..... 16333	Carlsbad Caverns National Park: general information..... 7326
Kanawha County, W. Va..... 14510	revise boundaries, report..... 17267
Pittsburgh, oxidizing effect of processing temperature and time..... 14522	Carlson, Harry W., swept-wing heavy- bomber configuration with large store (nacelle), Mach number 2.01..... 16358
coal products, properties of com- pounds..... 9109	Carlson, L. D., maintaining thermal balance in man..... 11496
Carcinogenesis, see Cancer.	Carlston, Charles W., drainage den- sity and streamflow..... 17528
Carcinoma, see Cancer.	Carlton, Paul F., prestressed rigid pavements for military air- fields, single wheel loadings on pre-tensioned and post-ten- sioned slabs..... 13880
Cardiac activity, see Heart.	Carnahan, O. R., extrusion, etc., of refractory alloys..... 13196
Cardiac diseases, see Heart diseases.	Carney, Charles B., North Carolina hurricanes, descriptive listing of tropical cyclones which have affected State..... 9508
Cardiopulmonary resuscitation..... 5887, 16960	Carroll, V. M., eradicating European pine shoot moth in commer- cial nurseries with methyl bromide..... 15582
Cardiovascular system: autonomic control of circulation during hibernating cycle in ground squirrels..... 13204	Carrollina, P. R., redevelopment area, statistical profile..... 15135
diseases— changes in serum lipid concen- trations with age in young men..... 9628	Carolina Charter, 5-cent commemo- rative postage stamp (poster)..... 7387
diagnosing by special methods, USSR study..... 2668	Caroline Islands: east, geology and petrography of volcanic rocks of Truk Is- lands..... 8338
nursing services for patients out- side hospital..... 9345	surface water supply through June 1960..... 2357
effects of norepinephrine thermo- genesis in warm- and cold- acclimatized rats..... 13206	Carosiello, D., mechanical proper- ties of welded aluminum- magnesium alloy plates..... 20013
healthy person, effect of micro- waves, USSR study..... 18009	Carotene, potential of algae Dunali- ella salina, USSR studies..... 6950
Cards, social security, how to obtain and use..... 16562	Carpathian Ruthenia, Ukrainian SSR, mountains, tourist handbook and guide..... 12675
see also Catalog cards.	Carpenter, Arthur E., health profes- sions educational assistance act of 1963, summary..... 19335
Cardwell, William D. E., ground- water geology and pump irri- gation in Frenchman Creek basin, Nebr..... 15615	Carpenter, Eugene M., Lake States wood-product imports and ex- ports via St. Lawrence Sea- way..... 6511
Career guidance, see Guidance.	Carpenter, Harry C.: desulfurizing residual fuel oil..... 7212
Career staff to the President, op- portunities for secretaries..... 1854	hydrocracking low-temperature tar from North Dakota lignite..... 10966
Careers, see Civil service—Occupa- tions.	Carpenter, Lloyd: analysis of high-purity vanadium by optical emission spectrog- raphy..... 7218
Careers in apprenticeship..... 14930	planetary perturbations, pt. 1..... 16394
Cargo, see Shipments—Shipping— Ships—Unloading and loading.	Carpenter, Raymond L., thermoelec- tric properties of enargite-type compounds..... 9129
Cargo carriers: desert evaluation, transporter, Roll- igon Mark 4..... 5755, 5757	
rolling liquid transporter trailer kit, evaluation..... 7483	
subarctic evaluation— Trackmaster..... 1571	
transporter, Nodwell..... 1572	
transporter, Rolligon Mark 4..... 5754, 5756	
tracking mechanisms and cou- plings for cargo resupply train concept..... 21143	
Cargo handling, GEM Jack Conex mover, cost, etc..... 20208	

# JANUARY-DECEMBER

	Entry		Entry
Carpenter, Walter H., jr., small business and pattern bargaining	1450	Case, Fred E., Los Angeles growth impact on demand for outdoor recreation facilities	3249
Carpets:		Case, J. E., regional geophysical investigations in La Sal Mountains area	2346
carpets and carpeting, current industrial reports	18683	Cases, <i>see</i> Brief cases—Flashlight cases.	
industry aided by Federal programs (address)	6044	Caseworkers, <i>see</i> Social workers.	
wilton, brussels, etc., Tariff Commission report	18347	Cash, B. L., comparison of gamma irradiation facilities	7600
Carr, Wilfred J., geology of American Falls quadrangle, Idaho	10280	Cash transactions, <i>see</i> Finance.	
Carrese, Marinao, relief	17088	Casings, rocket motor, resistance to crack propagation of high-strength sheet materials	3224
Carriers:		Casner, Maurice, and wife, relief	7889
common carrier services, applications, FCC	3646	Caspari, Max E., investigation of physical properties of semiconductors	1779
interstate commerce act, amendments	8001, 10005	Casper, Wyo., Casper Air Terminal, weather observations, hourly, summary, decennial census of climate	14798
hearings	1982, 13543	Casero, N. A., underground combustion oil-recovery experiment in Venango First sand	19875
interstate, quality of drinking water supplies, 1950-61	16494	Cass, Lewis S., homestead entry, re-instate	6095, 8044, 9804
transportation act of 1963, hearings	15319, 17176	Cass, Millard, address, June 24, 1963	14435
water, land and air, role in export control	12252	Cass, T. R., oxide bonding and creep-rupture strength of nickel	11163
<i>see also</i> Air carriers—Cargo carriers—Communications—Motor carriers—Pipe lines—Telegraph—Telephone—Water carriers.		Cassin, S.:	
Carriker, William R., role of school in prevention of juvenile delinquency	8181	effect of carbonic anhydrase inhibition in exercising rats	14921
Carroll, Dorothy:		effect of hypoxia on rate of oxygen consumption of mice at various environmental temperatures	14917
mineralogy of selected soils from Guam	19316	Cassinian domes, elastic stress distributions in Cassinian domes	16370
petrography of some sandstones and shales of Paleozoic age from borings in Florida	15613	Cast iron:	
Carrots, commercial growing	13170	continuous casting, foreign literature, bibliography	7741
Cars, <i>see</i> Freight cars—Railroad cars.		current industrial reports	3574, 7758
Carson, Peter, relief	15228, 20559	<i>see also</i> names of manufactured articles.	
Carson, R. H., drop-outs in magnetic tape systems	3220	Castelli, John P.:	
Carsteln, John, hydromagnetic wave propagation in constant dipole magnetic field	3160	lunar thermal emission measurements	50
Carter, Howard S., water-film cooling of cone at Mach number 2 for airstream, etc.	21000	radio measurements of 2 total eclipses	1738
Carter, R. W., automation of stream-flow records	19303	Castillo de San Marcos National Monument, general information	7327
Cartography, <i>see</i> Maps and charts.		Castings:	
Cartons:		aluminum, crystallization during continuous casting, radioactive isotope study, USSR	12462
folding, industry, outlook for 1963 and review of 1962	4516	copper, production of cast shapes by use of vacuum arc	14519
2-piece telescoping device for forming	7	ferrous, industry, outlook for 1963 and review of 1962	4528
Cartridges, metallic, recommendation of trade	11599	iron—	
Cartwright's Moving & Storage, Inc., accident	637	consumable-electrode vacuum-arc-melted electrolytic, preparation and properties	18251
Carver County, Minn., mineral interests, conveyance to Christmas Lake, Inc., etc.	11996, 17010, 17076	current industrial reports	3574, 5996, 7758, 13289
Carvers Harbor:		nonferrous, current industrial reports	3574
improvement, engineer report—		steel—	
departmental edition	403	continuous casting, 2 years experience, USSR study	2829
document edition	315	current industrial reports	3574, 5996, 7758, 13289
Cascade:		Castleman, L. S., fundamentals of diffusional bonding, 7th annual progress report, July 1, 1961-June 30, 1962	129
investigation of cooling characteristics of corrugated-insert air-cooled turbine blade for use in turboprop engine	1268	Castor beans, production in U.S. increases	12050
small air-cooled turbine rotor blades, temperatures and coolant pressure losses	5528	Castor oil, production in U.S. increases	12050
transonic-cascade program, experiments and results	10999		
Cascade Range, Douglas fir and associated species, natural regeneration using modified clear-cutting systems	20708		
Case, Francis H., memorial services	206		

# INDEX 1963

	Entry		Entry
Castro, Fidel:		Catalogs—Continued	
Castro-Communist subversion in		medical and veterinary zoology----	16716,
Western Hemisphere—		18409	
hearings -----	6194	meteorological satellite data—	
reports -----	6195, 7956	TIROS II, television cloud pho-	
Castro's network in United States,		tography -----	14800
Fair Play for Cuba Committee,		TIROS IV television cloud pho-	
hearings - 10019, 12022, 15393,	19062	tography -----	11407
print additional copies, report,	17289	Military Academy, West Point,	
Interview by Eugene Evtushenko,		1963-64 -----	16317
Russian poet -----	2791	National Exhibition of Prints held	
pro-Castro forces, attempts to per-		at Library of Congress -----	10927
vert American press, testimony		National Library of Medicine -----	12815
of Carlos Todd, hearing -----	4784	subject headings used -----	3892
pro-Castro propaganda activities in		Naval Academy, Annapolis, 1963-	
U.S., hearings -----	17189	64 -----	12936
regime in Cuba -----	11293	old-age and survivors insurance,	
Casualty insurance:		public information materials -----	1375
act of D.C., amend relative to false		rules for cataloging, LC and ALA,	
statements—		additions and changes -----	18055
law -----	13431	shelter components -----	4607, 16935
reports -----	6157, 13731	stores stock catalog -----	17443
District of Columbia rate regulation		special information on availa-	
laws, amend, hearings -----	17308	bility of items -----	4932
Catalase, and ovumcoid mixed films,		standard forms supplement -----	15513
force area study -----	12956	supplement -----	6442
Catalina Properties, Inc., relief -----	20459	teaching aids, medicine, lantern	
Catalog cards:		and microscopic slide sets -----	18549
Library of Congress—		Voice of America programs -----	14761
books, authors -----	3941	Catalysis:	
books, subjects -----	3864, 19809	heterogeneous, problems in, USSR	
motion pictures and filmstrips -----	3865	study -----	7002
music and phonorecords -----	18057	kinetics of catalytic reactions, So-	
National Library of Medicine -----	12815	viet research -----	16873
Cataloging:		Catalysts:	
cataloging handbook, H series -----	4794,	automotive exhaust, effect of lead	
15407, 17343, 19074		deposits -----	14509
cataloging manual M (series) - 8137-38,	10034	beds for 98-percent-concentration	
faint stars in Southern Hemisphere,		hydrogen peroxide -----	14558
USSR study -----	12352	hydrocarbons, catalytic oxidation -----	3051
Federal program implementation,		inorganic, bibliography -----	1872
realignment of item manage-		iron, carbides, nitrides, and car-	
ment responsibilities in Air		bonitrides in Fischer-Tropsch	
Force Logistics Command,		synthesis -----	19824
GAO review -----	10269	iron, Fischer-Tropsch oil circula-	
Library of Congress, limited cata-		tion process, experiments -----	9124
loging service, discontinuance,		organic, bibliographies -----	1869-71
rules, LC and ALA, additions and		uranium depleted, development for	
changes -----	18055	destruction of air pollutants in	
service bulletin -----	18054-56	automobile exhaust -----	4490
supply cataloging, Federal manual,		Catarrh, acute, of upper respiratory	
operating procedure -----	8137	tract, dispensary treatment	
Catalogs:		problems, USSR study -----	19438
Air Force Academy, Colo., 1963-64,	9635	Catecholamines:	
American Civil War, books in Army		excretion in heat-acclimatized men,	
Library, special list -----	5777	number of storage granules in adre-	
Armed Forces Institute -----	20318	nal medulla -----	4414
census publications -----	3499	release from adrenal slices and rate	
monthly supplement -----	3500	of respiration -----	20311
civil defense motion pictures -----	18715	studies on pilots during prolonged	
Coast and Geodetic Survey, nauti-		experiments in space cabin sim-	
cal charts -----	7795	ulator -----	16807
Coast Guard Academy, 1963-64 -----	7804	urinary excretion, effect of high	
Commerce Department publications,		concentrations of carbon diox-	
1962 supplement -----	18760	ide and diet -----	18505
copyright entries -----	338-339,	Caterpillars, see names of caterpillars.	
2107-10, 4790, 10027, 12031,		Cathart, James B.:	
13826-829, 19070-71, 20614		economic geology of—	
fakes and swindles in health field,	19248	Chicora quadrangle, Fla. -----	20730
Federal system, NASA indoctrina-		Keysville quadrangle, Fla. -----	10282
tion charts -----	12841	Cathey, Henry M., growing flowering	
Government publications, monthly		annuals -----	16741
catalog -----	3907	Cathode-anode couples, new, for sec-	
Homoptera -----	1646-51, 7549,	ondary batteries using molten	
interference shielding for internal		salt electrolytes, investigation -----	14899
combustion engines -----	9521	Cathode ray tubes, screens, USSR	
Interior Department films -----	8368	study -----	8721
Library of Congress—		Cathodes:	
books, subjects -----	3864, 19809	cold tube application, development,	
motion pictures and filmstrips -----	3865	USSR study -----	8538
music and phonorecords -----	18057	impregnated, translation -----	1778
national union catalog -----	3941	protection by use of depleted ura-	
subject headings, monthly supple-		nium anode -----	18101
ment -----	4214	sputtered thin films, research -----	7646



# JANUARY-DECEMBER

	Entry
Catholic War Veterans of United States of America, confer Federal charter, report.....	15369
Cation exchange, <i>see</i> Ion exchange.	
Cato Sells Mine, ore deposit, mineralogy and paragenesis, Monument Valley area.....	12220
Catoe, Lynn E.: material sciences papers.....	57
space science and technology books, 1957-61.....	9092
Cats: decorticated, habituation to caloric vestibular stimulation, studies.....	20312
effects on shivering of— decrebration and decortication.....	11491
septal and hypothalamic lesions.....	11494
strophine and reserpine.....	11493
observations on elicitation of secondary and inverted primary nystagmus by unilateral caloric irrigation.....	16865
unanesthetized, septal and hypothalamic stimulation.....	11490
Cattails, control in drainage channels and ditches, studies.....	13190
Cattermole, J. M., geologic effects of high-explosive tests, Nevada test site.....	5021
Cattle: beef— feeding pelleted rations.....	4375
feedlot and ranch equipment.....	1691
research at Front Royal Station, progress report.....	1656
dairy— DHIA sire summary list, 1962— Ayrshire, Guernsey, Jersey, Brown Swiss, Milking Shorthorn, Red Dane and Red Poll sires.....	4340
Holstein sires.....	1637
DHIA sire summary list, 1963— Ayrshire, Guernsey, Holstein, Jersey, Brown Swiss, Milking Shorthorn, and Red Poll sires.....	18102
Holstein, Ayrshire, Guernsey, Jersey, Brown Swiss, Milking Shorthorn, and Red Dane sires.....	9543
interstate movement, selected States, 1962.....	9444
prospects for foreign trade.....	8289
face fly population, estimating.....	1625
feeder pooling, improved marketing through grading and commingling.....	1702
feeding industry along North and South Platte Rivers, changes 1953-59.....	10052
fever tick eradication activities, 1962.....	1657
horn flies, how to control.....	14862
market, testing program, brucellosis eradication activities.....	4219
on feed, Arizona and California.....	3501
scabies eradication activities report, 1962.....	1620
situation, current and prospective.....	13164
sold for slaughter, selected markets.....	3501
stocker and feeder, shipments.....	4190
U.S. exporters guide.....	9448
use of natural openings in Arizona pine forest.....	1679
<i>see also</i> Calves—Cows—Livestock.	
Cattle ranches, <i>see</i> Ranches.	
Cattle ranges, <i>see</i> Range lands.	
Cattle ticks, eradication activities 1962.....	4986
Cattoli, Francis R., fused-salt electrolysis of tungsten.....	5481

	Entry
Caucasus: coastal resorts, guide book, USSR.....	14160
decane oxidizing bacteria isolated from depth waters of northern Cascaucasus, USSR study.....	17700
railroad guide, Moscow-Caucasus.....	15847
Cauliflower, prepackaged vacuum-cooled, effect of chemical treatment on quality.....	13148
Caviris, Maria, relief.....	15209
Cavitation: and noncavitation performance of 80.6° flat-plate helical inducer.....	1281
detection and location tests.....	4480
venturi flow, effects of air content and water purity on liquid tension.....	9146
Cavity reactors, <i>see</i> Reactors (atomic).	
Caya, Albert, Jr., economic developments in Federal Republic of Germany, 1962.....	8396
CCC, <i>see</i> Commodity Credit Corporation.	
CCL, <i>see</i> Coating and Chemical Laboratory.	
CD newsclips.....	3502A
Ceanothus, mountain whitethorn, defoliation effects of Great Basin tent caterpillar.....	12162
Cebolla Creek, titaniferous iron deposit, diamond-drill, sample data statistical analysis.....	14508
Cecl soil, <i>see</i> Soils.	
Cedar, juniper-pinyon stands, aerial volume tables.....	4983
Cedar Bayou, flood control survey, authorize, report.....	15249
Cedar Rapids, Iowa: census of housing, 1960, standard metropolitan statistical area, tenure, rooms, condition and plumbing, etc., errata sheet.....	16907
consumer expenditures and income, 1960.....	10590, 14455
Cederstrom, D. J., ground-water resources of Fairbanks area, Alaska.....	8344
Celebes, sailing directions.....	3206
Celestial mechanics, <i>see</i> Three-body problem.	
Cell drying mechanism in proliferating cultures of blue-green algae anabaena variabilis and amorphonostoc punctiforme, USSR.....	12376
Cells: cancer, antibiotic cruzin reaction, USSR study.....	19626
electrochemical, use to analyze high-purity iron.....	7219
irradiated, role in energy metabolism in restoration, USSR study.....	20911
living, excitation as disturbance of steady state of open systems, USSR study.....	19399
multiplication and growth of hy-droid polyps, USSR study.....	8652
nucleic acid content in nerve cells in various functional states, USSR study.....	17810
partial irradiation, development of apparatus.....	16796
protein synthesis, nucleotide code and regulation, USSR study.....	6884
tissue culture, interaction with Sendai virus, fluorescent microscopy study during initial phase, USSR.....	12491
ultrastructure characteristics of nucleolus in cell nuclei of Brown-Pearce tumor, USSR study.....	19508

# INDEX 1963

Entry	Entry
Cells—Continued <i>see also</i> Blood—Epithelial cells— Plasma cells. Cells (electrolytic), <i>see</i> Electrolytic cells.	Census—Continued population, 1960— characteristics of population... 11605- 613, 13274-279, 15039-46, 16882-886, 18647-668, 20348- 349. final reports... 11639-640, 13307, 15083-86, 16908, 18700-705, 20368 supplementary reports... 1876-86, 4575-76, 7747 population and housing 1960, enumeration time and cost 16909 study... 1887 tract memo... 1887 <i>see also</i> subjects.
Cellulose: decomposing myxobacteria, species and varieties, description, 12493 USSR study... 7683 decomposition resulting from cel- lulose-destroying fungi chae- tomiaceae, monograph... 7683	Census Bureau: bulletin... 9712 career opportunities for majors in various fields... 7746 duties of enumerators, amend U.S. Code— hearing... 8007 report... 11834 methodology and scores of socio- economic status, description of CB measures used in 1960 census program... 16911 press releases... 4041 publications— catalog... 3499 monthly supplement... 3500 on Governments, recurrent re- ports scheduled, 1964... 15034 schedules... 169, 7748-49, 7766, 9713, 11641 seasonal adjustment methods, tests and revisions... 16906 special census, summary... 9726 technical papers... 7768, 11636, 13304, 16906 working papers... 6009, 16910-911
CEMA, <i>see</i> Council for Economic Mutual Assistance.	Census Tract Conference, papers presented, Sept. 8, 1962... 6009 Centenarians by sex and State, 1960... 9507 Centolanzl, Frank J., heat transfer to blunt conical bodies having cavities to promote separa- tion... 14590
Cement: bibliography... 1866 chemistry, symposium, proceed- ings... 5619 highway construction usage fac- tors... 20117 minerals yearbook chapter... 19825 North Vietnam factory, expan- sion... 7017 portland— from Dominican Republic, de- termination of likelihood of injury... 9458 production, shipments, and stocks, monthly report... 3503 technological equipment in plants, industrial assembling methods, USSR study... 15950	Central African Republic: economic, technical and related, assistance, agreement... 11313 Sudan boundary, study... 20161 Central America: east coast, sailing directions, change... 7346 health information for travel in... 16500 population growth... 13663 recent Foraminifera off Central America (series)... 12230 west coast, sailing directions... 21047 Central and Southern Florida Proj- ect: Shingle Creek Basin, engineer re- port— departmental edition... 2183 document edition... 2073 Central Arizona project, authorize, construct and maintain, hear- ings... 20610 Central City, Colo., economic geology of district... 19311 Central facility for recording and processing transient-type data... 3121 Central Intelligence Agency: employees, improved retirement and disability system— hearings... 18923-94 reports... 18844, 18902 Central Management Office, Food Services Dept., expenses, ap- propriation of public money, report... 13784 Central nervous system, <i>see</i> Nervous system.
Cemeteries, <i>see</i> National cemeteries— <i>also</i> names of cemeteries, or places where located.	
Cenozoic era: geology— Mammoth area, Pinal County, Ariz... 8332 part of area inundated by late Pleistocene lake... 2345	
Censorship, military cold war educa- tion and speech review policies, hearings, index... 2085	
Census: agriculture, 1959— final reports... 170, 1901-2, 6008, 11637, 13305 announcement... 5987 general reports... 171 statistics by subjects, bound volume... 4592 business, 1958, wholesale trade, subject reports... 16877 decennial, climate, United States... 1592, 7507-14, 9493-9502, 11386-406, 13118-127, 14779-798, 16658- 666, 20233-243, 21155-175. economic, take one year earlier starting in 1968, amend U.S. Code— hearing... 8007 report... 7953 governments, 1962— final reports... 5990, 15035, 16878, 20342 governmental organization, an- nouncement and order form... 5986 preliminary reports... 152-154, 5991 topical studies announcement and order form... 20341 housing, 1960— components of inventory change... 1903-8, 4593-94, 7769, 11638 final reports... 173, 13272-273, 15036-38, 18643-646, 20343-347 metropolitan housing... 1909-18, 15080-81, 16879-880, 16907 announcement and order form... 18638 States and small areas... 1919-20, 18699 United States summary... 15082 manufactures, 1958, subject re- ports... 5992	

# JANUARY-DECEMBER

Entry	Entry
Central Radio Propagation Laboratory:	Central Valley project—Continued
CRPL series D..... 3476	Shasta Dam keystone, general information..... 16551
ionospheric predictions based on numerical methods of mapping, handbook..... 3172	Trinity River division, general information..... 16552
Central States:	Centre County, Pa., coal carbonizing properties..... 16333
charcoal production, 1961..... 6504	Centrifuges, ultracentrifuges, USSR development..... 8970
commercial fisheries, research and development..... 13953	Century of service, the 1st 100 years of Department of Agriculture..... 9567
Corn Belt, commercial farms, costs and returns, 1962..... 8146	Cepero <sup>2</sup> , Bonnilla, Raul, speech, Nov. 20, 1962..... 2706
costs of transporting freight..... 5102, 8430, 10353, 10355	Cephalopods, Philippine Islands..... 19974
East North—	Ceponis, Michael J., some effects of packaging and merchandising on quality of McIntosh apples in New York City..... 4334
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics..... 4566	Ceramals:
census of housing, 1960, standard metropolitan statistical areas, tenure, rooms, condition and plumbing, etc..... 1912	bibliography..... 1868
county business patterns, activities covered by OASDI program..... 13283, 15049, 18672	electroplated cermet coatings for oxidation protection of substrates in excess of 2000° F..... 86
East South—	titanium- and chromium-carbide-base cermets, investigating hardness..... 2845
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics..... 4569	Ceramics:
census of housing, 1960, standard metropolitan statistical areas, tenure, rooms, condition and plumbing, etc..... 1915	bibliography..... 1867
county business patterns, activities covered by OASDI program..... 15053, 18674	ceramic-metal seals for high-power tubes..... 18498
fallout facilities and fuels on farms..... 13092	fuels, irradiation testing, summary report..... 18566
principal electric facilities, maps..... 518, 521	high temperature ceramic structures..... 9279
pulpwood, production & consumption, 1961..... 6482	made from sinterable oxide powders, investigation..... 9639
South and North, nonmetropolitan areas, employee earnings, June 1962..... 1448C	mechanical behavior of crystalline solids, symposium proceedings..... 9207
South, ground-water levels, 1956-59..... 610	reactor fuel particles coated, symposium proceedings..... 15008
West North—	Soviet, articles..... 2620
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics..... 4567	technology..... 18520
census of housing, 1960, standard metropolitan statistical areas, tenure, rooms, condition and plumbing, etc..... 1913	thermal protection materials, evaluation at moderate heating rates and high total heat loads..... 16382
county business patterns, activities covered by OASDI program..... 13284, 15050, 18673	Cereals as food, breakfast foods in industry, changes in market structure..... 16749
West South—	Cerebral cortex:
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics..... 4570	animal, experiments..... 19471
census of housing, 1960, standard metropolitan statistical areas, tenure, rooms, condition and plumbing, etc..... 1916	higher cortical functions of man, USSR study..... 14400
county business patterns, activities covered by OASDI program..... 13285-286, 18675-676	USSR studies..... 16121
Central States Forest Experiment Station:	Cerebral pulsation in closed cranial cavity..... 9193
miscellaneous release..... 566	Ceremonies (military), see Military ceremonies, honors and salutes
report, 1962..... 8300	Ceres (asteroid):
station notes..... 6481	rectangular coordinates, 1960-80..... 7344
technical papers..... 567, 4979, 6482, 8291	Cerium:
Central Valley project:	heat of solution of hydrochloric acid..... 3100
American River division, general information..... 16544	nitride, preparation, USSR study..... 10620
Friant division, general information..... 13034	radiotracer studies of distribution in steel..... 14521
history and achievement..... 21101	spectrographic analysis by carrier distillation technique..... 1231
report, 1962..... 13033	Cerium isotopes:
	Ce-144 cells, beta-emitting radioisotope sources, analysis..... 21003
	Ce-144, gastro-intestinal tumors induced, USSR study..... 15844
	radio-cerium solutions, physico-chemical state and metabolic path, research study..... 4470
	Cerium sesquioxide:
	high temperature heat contents and entropies..... 14513
	low-temperature heat capacities and entropies at 298.5°..... 14511
	Cermets, see Ceramals
	Cerrito, Ambrose A., relief..... 11780
	Certificated air carriers, see Air carriers

# INDEX 1963

Entry	Entry
Certificates, <i>see</i> types of certificates, or subjects involved.	
Certificates of indebtedness, <i>see</i> Treasury certificates of indebtedness.	
Certification of air carriers, <i>see</i> Air carriers.	
Cesium:	
adsorption on clay minerals.....	5017
coated ion-thruster electrodes, thermionic emission.....	19916
diode, discharge effects.....	9597
ions, research on volume recombination.....	7482
vapor, compatibility with selected materials at temperatures to 1200°F.....	16369
Cesium chloride, thermodynamic properties.....	5484
Cesium iodide, thermodynamic properties.....	5484
Cesium isotopes, Cs-137, use in determination of cation exchange capacity.....	599
Cetacea, significance to science in bionics, USSR study.....	2881
Ceylon:	
around world with Bob Ponge, report on recent trip to.....	2046
economy, basic data.....	10337
education exchange program financing, agreement.....	16595
educational data.....	375
labor conditions.....	18050
labor law and practice.....	7142
Peace Corps program, agreement.....	9411
CGS series.....	4044
Chace, William G., bibliography of electrically exploded conductor phenomenon.....	5854
Chaco, William G., Jr., October test shipment of Florida grapefruit from Tampa to Hamburg, Germany.....	9533
Chad:	
Libya boundary, study.....	20148
newly independent nation, fact sheet.....	9393
Sudan boundary, study.....	20160
Chadam, J., turbulent diffusion theory.....	7607
Chadwick, Donald R., presentation, Aug. 21, 1962.....	1401
Chaetomaceae, cellulose-destroying fungi, taxonomy, monograph.....	7683
Chagnon, Charles W., joint Indo-United States balloon flight program, 1961.....	13197
Chain banking, stockholder and loan links of 200 largest member banks.....	2062
Chains, Federal item identification guides for supply cataloging, supplement.....	3654
Chairs:	
rotary and straight, wood, general office, Federal standard.....	12129
steel, general office, Federal standard.....	12128
Chakalov, Lyubomir, biographic information.....	12405
Challenge and change, brief history of U.S. Department of Labor 1913-63.....	7135
Challenge Experimental Forest:	
ponderosa pine—	
reproduction in relation to seed supply.....	10226
seedling mortality, effect of advance growth.....	19257
reproduction losses from slash disposal.....	19261
Challenge of jobless youth.....	9327
Chamber devices, expansible, classification bulletin.....	16476
Chambers, Cecil W., bacteriological and chemical behavior of silver in low concentrations.....	16522
Chamise, broadcast spraying of 1st-year sprouts, tests to determine effectiveness of sprays.....	10228
Champaign, Ill., consumer expenditures and income, 1960.....	12790, 14459
Champion, Kenneth S. W., atmospheric structure and its variations in lower thermosphere.....	16772
Champlin, Jerry B. F., rapid determination of permeability in porous rock.....	1238
Chance distribution in inconsistent response patterns in paired comparison and multiple ranking designs.....	7625
Chancelleries:	
foreign, in D.C.—	
location in business districts, hearings.....	7995
location in residential districts, prohibit—	
hearings.....	13800, 20497
report.....	13776
Chanceries, <i>see</i> Chancelleries.	
Chandler, Maria N., relief.....	9961
Chandler, Tex., railroad accident.....	8434
Chandra, S., electron density distribution in upper F-region.....	9181
Chaney, C. L., spectrochemical analysis of solutions, use of carrier-precipitation, etc.....	14514
Chang In Wu, <i>see</i> Wu, Chang In.	
Chang Sheng, <i>see</i> Sing, Jeung.	
Changes in structure of Federal debt.....	8258
Changing shipping patterns on St. Lawrence Seaway.....	14873
Changing status of women.....	1784
Channel Islands, California, general information.....	11116
Channels of communication.....	10062
Chao Fu, defector from Communist China, testimony, hearing.....	334
Chaparral, seedling burns, comparison of 16 grasses and forbs.....	17492
Chapin, Arthur A.:	
addresses.....	
Apr. 8, 1963.....	9021
Oct. 19, 1963.....	19775
Chaplains, Air Force, administration and program, 1947-60.....	9606
Chapman, Andrew J.:	
ablation materials investigation.....	11019
thermal protection materials at moderate heating rates and high total heat loads.....	16382
Chapman, Dean R., lunar origin of tektites.....	5584
Chapman, Gary T., measurement of heat transfer in free flight by use of catcher calorimeter.....	14574
Chapman, Janet G., consumer in Soviet Union and United States.....	9062
Character guidance, <i>see</i> Guidance.	
Charcoal:	
hydrogasification.....	3083
production in Central States, 1961.....	6504
wood-charcoal production, California, 1961.....	15557
Charczenko, Nikolai:	
aerodynamic characteristics of towed spheres, etc.....	11065
nozzle hinge moments of Saturn C-1 model.....	20988
Charge-exchange effects on accelerator impingement of electron-bombardment ion rocket.....	11040

# JANUARY-DECEMBER

	Entry		Entry
Charitable institutions:		Chautauqua National Wildlife Refuge,	
social security, how it works for		birds	4960
nonprofit organizations and		Chaves County, N. Mex., saline ground	
their employees	13046	water in Roswell Basin, 1958-	
tax exempt foundations, their im-		59	8341
pact on our economy	2063, 18960	Chavez, Dennis, memorial services	16969
Charitable trusts, tax exempt, their		Checklists:	
impact on our economy	2063, 18960	business service	3490
Charities, fund raising within Federal		Commerce services	6048
service for voluntary		international business publications,	
health and welfare agencies,		overseas business, reports	8422
manual	11666, 20382	periodicals currently received in	
Charles J. Cleary awards for papers		Army Library, special list	5778
on material sciences	57	State publications, monthly	3908
Charleston, S.C.:		see also names of departments, etc.,	
electric facilities of area, map	522	issuing checklists—also sub-	
Municipal Airport, weather observa-		jects.	
tions, hourly, decennial census		Checks:	
of climate	14793	and warrants, government, delivery	
Charleston, W. Va.:		to addresses outside U.S.,	
Kanawha Airport, weather observa-		regulations	13102, 16636
tions, hourly, decennial		forged, Government, issued at Parks	
census	13127	Air Force Base, Calif., relief	
occupational wage survey—		of persons harmed as result of	
departmental edition	14468	negotiation	11769
document edition	13449	social security	9309
Charlotte, N.C.:		Cheese:	
Douglas Municipal Airport, weather		and cheese products, definitions and	
observations, hourly, summary,		standards	10203
decennial census	21166	cottage, production cost in divers-	
occupational wage survey—		ified milk plants, Kansas, Mis-	
departmental edition	14465	souri and Oklahoma	14872
document edition	13446	mites, effects of temperature and	
Charlotte Lykes (SS):		humidity on	9581
launching ceremonies at Bethlehem-		New York City, wholesale market	
Sparrows Point (remarks)	10933	facilities	1701
Charters, Federal, investigation, au-		Chelan County, Wash., forest statis-	
thorization, report	6253	tics, 1959-60	15587
Charts:		Chelating agents in separation of	
airborne radar observations for re-		rare-earth compounds by sol-	
fraction by terrestrial atmos-		vent extraction with amines	7226
pheres, corrections	7596	Cheltenham, Md., see Naval Radio	
Commodity Credit Corporation, op-		Station, Cheltenham.	
erations, June 30, 1962, graphic		Chemical analysis:	
summary	11700	brines from oil-productive forma-	
graphic presentation of Federal		tions in south Arkansas and	
employment	9752	north Louisiana	18099
graphs and transportation prob-		microanalysis methods	18706
lems, USSR study	15930	nondetriral siliceous sediments	2351
Labor Statistics Bureau, wall		occurrence and distribution of	
charts	1186-88	strontium in natural water	5029
prices, chartbook—		rivers and lakes, geochemistry	
departmental edition	7168	data	6558
document edition	6079	sandstones, geochemistry data	2350
supplement—		subsurface waters, geochemistry	
departmental edition	18039	data	2349
document edition	17065	tipple and delivered samples of	
sold by Superintendent of Docu-		coal	18104
ments, price list	12981	volcanic emanations	8339
see also Maps and charts—Organ-		see also names of substances	
ization charts—also special		analyzed.	
subjects.		Chemical and biological action of	
Chase, John L., doctor's degrees		ultrasonics, USSR	20882
awarded by all U.S. institu-		Chemical and physical beneficiation	
tions 1950-51 through 1959-		of Florida phosphate slimes	5490
60	2154	Chemical elements:	
Chase, William W., problems in plan-		analysis of natural radioelements	5921
ning school facilities in metro-		first 18, thermodynamic properties	
politan centers	6337	to 6000° K for 210 substances	19903
Chass, Robert L., panel presentation		radiation biochemistry	7641
Dec. 11, 1962	1423	rare and trace, determination in	
Chatham, Mass., line-trawl fishery for		soils, plants and water	18510
cod and haddock	17450	superconductivity occurrence, rules	18306
Chattahoochee River:		thermodynamic properties	16318
engineer report—		X-ray mass absorption coefficients,	
departmental edition	2185	literature survey	12826
document edition	2000	Chemical engineering:	
Chattanooga, Tenn.:		Hungary, achievements of Budapest	
electric facilities of area, map	522	Technical University in past 15	
Lovell Field, weather observations,		years	8762
hourly, decennial census	21175	technicians, training for medical	
occupational wage survey—		industry, USSR	19639
departmental edition	3033	utilization, bridging development	
document edition	2020	to industrial use	1638



# INDEX 1963

	Entry		Entry	
Chemical equilibrium, <i>see</i> Equilibrium.		Chemicals—Continued		
Chemical industries, <i>see</i> Chemicals.		plants, investment and operating costs, Jan.-Dec. 1962, bibliography	12831	
Chemical light meter for forest research	10221	processing plants, analytical methods used by control laboratory, supplement	14980	
Chemical reactions:		protection of mammals from ionizing radiation, USSR study	10619	
biochemical changes resulting from irradiation, high temperature, burns, poliomyelitis, USSR study	15932	radioactive waste area, accumulation and cycling during early vegetational succession	127	
chemical equilibria and rates of manganese oxidation	8354	registered agricultural pesticide, summary of uses, supp.	1663, 13161	
high temperature, bond dissociation energies, etc.	12874	thesaurus, ASTIA	1792	
ignition of combustible mixtures by laminar jets of hot gases	19865	treatment, effects on quality of pre-packaged vacuum-cooled cauliflower	13148	
in atmosphere, German study	19575	TVA development, 1962	7470	
kinetics catalytic reactions, Soviet research	16873	USSR bloc institutions, Hungarian chemists visit	12623, 14115	
Kr-85 elutriate analytical techniques to measure oxidation-reduction products in liquid state, development	18594	USSR industrial development, translations	698, 919, 1072, 1076, 2477, 2672, 2848, 2978, 5198, 5262, 6684, 6799, 6896, 6933, 7039, 7052, 7082, 7106, 7116, 8473, 8551, 8770, 8881, 8899, 8940, 8973, 9004, 10511, 10552, 10611, 10648, 10815, 12297, 12408, 12423, 12452, 12521-522, 12626, 12694, 12704, 14111, 14145, 14199, 14262, 14265, 14272, 14324, 14332, 14369, 14373, 14410, 15676, 15689, 15693, 15746, 15858, 15866, 15882, 15887, 15927, 15946, 15967, 16001, 16027, 16038, 16044, 16048, 16061, 16066, 16093, 16196, 17579, 17654, 17712, 17723, 17877, 17932, 17955, 19478, 19599, 19640, 20786, 20844, chemical machine building	667, 728, 763, 5155, 6916, 7113, 8648, 10494, 10526, 10617, 10843, 12340, 12427, 14267, 15764, 15821, 15914, 17584, 17623, 17949, 19573, 20805.
monoethanolamine chemistry, review	3222	USSR, low-tonnage compounds, critical shortages	10584	
propellant tank material and rocket fuels or oxidizers when impacted by small high-velocity projectiles	16393	water quality in Frenchman Creek basin, Nebr.	15615	
radiational, mechanism, USSR study	14278	<i>see also</i> Organic compounds.		
titanium and titanium subchlorides, reaction rate in molten sodium chloride	5489	Chemistry:		
uranium recovery, metallic reactions	4484	abstracts pertaining to Communist China in Soviet journals	733, 8448, 10766, 19566	
Chemical rocket propulsion, papers	5547	Atomic Energy Comm. basic research program (off site), summaries	15001	
Chemical warfare, contaminants, removal from water, methods	16520	cement, symposium, proceedings	5619	
Chemical weapons, <i>see</i> Weapons.		chemical synthesis of nucleic acids, USSR	12495	
Chemicals:		East European journals, abstracts	940, 1048, 1111, 2495, 2647, 2726, 2-78, 2948, 5175, 5276, 5308, 5383, 6717, 6-79, 6911, 7089, 8476, 8608, 8776, 8886, 10396, 10428, 10453, 10537, 10609, 10712, 10794, 12301, 12418, 12439, 12528, 12668, 12732, 12742, 14086, 14225, 15715, 15744, 15924, 15983, 16141, 16207, 16218, 17718, 17792, 17876, 19395, 19527, 19647, 19723, 20763, 20841.	
agricultural, pesticide residues, facts for consumers	20691	eastern tropical Pacific Ocean, chemical observations	2299	
burns of stomach and their treatment, USSR study	12496	gravimetric method for analyzing blast furnace top gas	5494	
chemical machine construction, non-metallic materials for sliding bearings	20315	journal of research, National Bureau of Standards	3815, 9203, 12894	
chemicals and allied products industries		major principles for general education, evaluation list	4826	
outlook for 1963 and review of 1962	4521			
research and development, 1956-61	19986			
chemicals and chemical products, Federal Item Identification guides for supply cataloging, supplements	3657			
coal, minerals yearbook chapter	20942			
Communist bloc, accelerated production planned, USSR translation	17695			
compounds approved for use under poultry and poultry products inspection and grading programs, list	4333, 16704			
control of brush in California reforestation	6495			
dry chemical fire extinguishers, vacuum pneumatic process for filling	18253			
effect on thermogravimetric analysis of ponderosa pine	19266			
household, food, drug, and cosmetic act, FDA enforcement and compliance	6472			
household, read labels, FDA publication	19246			
industry reports	3511			
inorganic, current industrial reports	1890, 1892, 3574, 7757			
insect attractants, materials tested	14851			

# JANUARY-DECEMBER

	Entry		Entry
Chemistry—Continued		Chesapeake Bay:	
manganese in natural water		blue crab fishery, types of fishing	
(series).....	8354	gear, etc.....	4945
nuclear reactor, conference.....	15006	crab pot, modification.....	13957
organophosphorus compounds, USSR study.....	14335	fisheries, annual summary, 1961.....	544
physicochemical properties of glass fibers, USSR study.....	10823	storm warning facilities chart, 1963.....	11384
physico-chemical state and metabolic path of radiocerium solutions, research study.....	4470	Upper region, waterfowl populations.....	15536
radioactive isotopes, removing from the organism.....	10476	Chesky, Edward J., doing business with Common Market.....	8379
strontium in natural water (series).....	5029	Chest:	
surface waters of Pennsylvania.....	6566	surgery in World War II.....	5920
USAF air base gravity network.....	5855	thoracic cage impedance measurements, calibration of impedance pneumograph.....	16801
USSR—		Chester County, Pa., soil survey report.....	13056
chemical sciences, translations.....	8847	Chester County, Tenn., forest inventory statistics.....	3379
courses for educating and developing in students dialectic-materialistic world outlook.....	17580	Cheyenne, Wyo., trees for windbreaks, spacing distance, etc., experiments.....	20294
Department of Chemical Sciences, meeting.....	5162	Cheyenne River Sioux Tribe, <i>see</i> Sioux Indians.	
low tonnage chemicals, critical shortages.....	10584	Chi-ehr (Chi-ning to Ehr-lien) Railroad, Communist China.....	2661
new achievements.....	897	Ch'i-lien Mountains:	
problems of medical chemistry (periodical).....	970, 2764	geological gazetteer, Communist China.....	14104, 14279
rare earth elements, all-Union conference.....	774	paleontological description, Communist China study.....	14279
scientific abstracts, 17611, 17947, Soviet and Chinese articles, English abstracts.....	19629	Chicago, Ill.:	
translations.....	3622	aircraft accidents.....	1931-32
Yugoslavia, chemical institutes, reorganization study.....	5195	board of trade, futures trading and open contracts in wheat, corn, etc.....	3752
<i>see also</i> Agricultural chemistry—		census of housing, 1960, standard consolidated area, components of inventory change.....	1905
Biochemistry—Chemical engineering—Cytotechnology—		Chicago Skyway toll bridge, operate as freeway—	
Geochemistry—Inorganic chemistry—Organic chemistry—Radiochemistry.		hearings.....	17185
Chemists:		report.....	18872
examination announcement, discontinuance notice.....	15104	civil rights, public schools, 1962.....	181
Hungarian chemists journal, translations.....	12588	consumer expenditures and income, 1960, advance report.....	1165, 7150
Hungarian, visit Soviet block chemical institutions.....	12623, 14115	electric facilities of area, map.....	517, 2266
Rumanian, Costin D. Nenitescu, biographic information.....	2492, 10623	Federal reserve member banks, condition, weekly statement.....	3535
Chemotherapy:		income, education, and unemployment in neighborhoods.....	5454
cancer reports (periodical).....	3495	Mercantile Exchange, futures trading and open contracts in eggs, potatoes, butter.....	3749
tuberculosis, VA-Armed Forces cooperative study.....	9475	metropolitan centers, outdoor recreation, present and future.....	3248
Cheng-fa yen-chiu (periodical):		occupational wage survey—	
translations.....	8816	departmental edition.....	16276
Chepil, W. S.:		document edition.....	15167
deep plowing of sandy soil.....	1720	O'Hare International Airport, weather observations, hourly, decennial census.....	11391
mulches for wind and water erosion control.....	13156	receipt of fresh and frozen fishery products, 1961.....	546
Cherokee Indians, lands, conveyance in trust, report.....	13595	Chicago and Eastern Illinois RR, accident.....	8435
Cherries:		Chicago and North Western Ry., accident.....	12266
black, effect of pre-germination treatments on seed.....	17498	Chicago Island:	
brined, analytical and quality control methods.....	14839	geology of Freshwater Bay area.....	6545
production, use, value, by States, 1961-62.....	16615	reconnaissance geologic mapping, stratigraphic and structural study (series).....	10284
sour, crop production report.....	14737	Chickasawhay River:	
Cherrix, Caroline C., women telephone workers and changing technology.....	20254	flood control, engineer report—	
Cherry blossoms, <i>see</i> Japanese flowering cherry.		departmental edition.....	2186
Chers amis, renseignements a l'usage des voyageurs se rendent aux Etats-Unis.....	7397	document edition.....	1992
Chert, nondetrital siliceous, geochemistry data.....	2351	Chicken plague, <i>see</i> Fowl pest.	

# INDEX 1963

Entry	Entry
Chickens:	Child welfare institutions, public institutions for delinquent children, statistics----- 6015, 15092
blackhead, control----- 7568	Children:
broilers--	abused--
carcass weight related to weight, etc., of parts----- 11459	battered child, bibliography----- 16912
chicks placed in 22 States, 1962-1963, by States----- 11330	identification from multiple bone injury histories----- 20365
commercial production, etc., Jan. 1, 1962-63, by States----- 11331	principles and suggested language for legislation----- 15088
commercial production, 22 States, 1962----- 9440	accidents, causes and prevention-- 16915
feed financing programs used by cooperatives----- 20656	behavior, influence of breast feeding on, study----- 15094
increasing sales through offering additional cut and recipe materials, report----- 15419	books for----- 15089
egg production tests, records of stocks entered in performance tests in U.S. and Canada----- 1636	Botkin's disease (infectious hepatitis), USSR conference----- 19474
farm production, disposition, cash receipts and gross income, 1961-62, by States----- 11331	child-care expenses, income tax deductions in case of woman deserted by husband----- 7823
fryer, effects of sodium polyphosphates on weight during chilling----- 11460	law----- 4744, 6277
improved methods for eviscerating, agricultural marketing----- 5782	child care in community fallout shelters----- 11642
layers and egg production, 1961-62----- 11332	child feeding program, continuation, agreement with Italy----- 1532
layers and rate of lay, etc., Jan. 1961-Mar. 63----- 11334	child welfare--
management in subtropical, semi-arid climate----- 1718	programs, problems and services-- 13311
marketing spreads for frying chickens, U.S. and cities----- 8149	role in mental retardation (speech)----- 18708
meat production tests, Canada and U.S.----- 9542	services----- 18707
national poultry improvement plan, breed distribution of participating flocks----- 11	services, organization in States-- 11644
on farms, Jan. 1, 1962-63, by States----- 11331	children and neglect, hazardous home conditions, AFDC program to protect----- 19155
pullet chicks for broiler hatchery supply flocks----- 4120	Children's Bureau history, 5 decades of action, inserts-- 11643, 20366
tested by official State agencies, monthly report----- 4248	creative life----- 4597
Chicora quadrangle, Fla., economic geology----- 20730	Cuban refugees, care away from home, observations of reporter-- 6013
Chicory:	deceased veterans', increased payments----- 11713
duty, suspension, continue----- 13423	law----- 6144, 9974
reports----- 11849, 13745	define the term child for civil service pensions, lump-sum payments----- 8006
Chidester, Alfred H., petrology and geochemistry of selected talc-bearing ultramafic rocks and adjacent country rocks in north-central Vermont----- 603	report----- 7954
Chief Medical Director, see Medicine and Surgery Department, Veterans Administration.	dependent--
Chien-chu (periodical):	aid to families, eligibility sampling, Jan.-Apr. 1963----- 20746
translations----- 10599	family aid----- 20654
Chien-chu hshueh-pao (periodical):	4 in every 100 get AFDC----- 20655
translations----- 801, 908, 8527, 14098	of unemployed parents, aid----- 3435
Chiggers, how to fight them----- 9572	public assistance to families, program facts----- 10095
Child care, see Children.	public assistance under social security act, monthly cost standards used by States, Jan. 1961----- 3328
Child development, see Children.	education--
Child health, see Children.	deny Federal assistance to institutions which practice racial discrimination--
Child labor, agricultural employment, extend child labor provisions of labor standards act, report----- 11970	hearings----- 17168
Child life, see Children.	report----- 18908
Child placing:	federally affected areas--
foster care for delinquent girls-- 1924	annual report 1962----- 480
improving quality of foster care by use of group methods with foster parents----- 9733	extend and amend law--
responsibility under social security act, extend present provision--	hearings----- 11896
law----- 13422	report----- 13607
reports----- 11850, 13744	young children, selected references, list----- 8162
training of child welfare workers for placement responsibilities-- 4601	educational assistance to children of veterans with wartime total disability, report----- 15289
Child study, see Children.	educationally disadvantaged program, conference on teaching-- 15439
Child welfare, see Children.	elementary schools, guidance----- 13852
	exceptional--
	education----- 385
	exceptional children and youth, publications, list----- 20084
	research programs, studies in progress----- 176, 11647

# JANUARY-DECEMBER

	Entry
Children—Continued	
exceptional—continued	
State education agency publica- tions	13847
teacher training, extend program, report	13579
farm and nonfarm, age-grade school progress, 1960	17354, 20625
films on child life, list	1927
food for families with school chil- dren	16737
food for family with young chil- dren	4353
gains for children in 1963	20366
gifted and talented, State depart- ment of education personnel concerned with programs, di- rectory	372
graduate fellowship program for leadership preparation in educa- tion of mentally retarded children	10071
grouping in elementary school, re- search and implications, se- lected references	17376
handicapped—	
facilities and equipment, selected references	20642
special services	13111
hard of hearing, services for, pro- gram development guide	16917
health services, grants to combat mental retardation—	
law	20437
reports	15275, 17118, 19017
illness, data from national health survey	20367
intercountry adoption, guidance manual for service couples, DOD pamphlet	7660
interdisciplinary journal for profes- sions serving children	3512
keep them in school for basic edu- cation	12781
learning difficulties, short-term treatment	16788
maternal and child health services, 1960, statistics	4599
mentally retarded—	
child health projects, role of so- cial worker	6010
clinical programs, listing	16914
conference on implications of re- port of President's Panel on Mental Retardation	16918
guide to services of social agen- cies	13312
migrant, education—	
general information	10084
problems and trends	20639
migratory farm workers', improve educational opportunities—	
hearings	10021
report	11971
modern science for development of new knowledge and skills	19105
mongoloid, families of	7770
nutrition—	
Agriculture Dept. aids	14815
use of hydrolysin L-103, USSR study	5220
pediatrics—	
current problems, USSR study	12307
scientific research, 1960 and 1961 and future tasks	2733
police work with, perspectives and principles	175
publications concerning, price lists	14656, 16489
research program, studies in prog- ress	176, 11647
responses to nuclear war threat	16913
rheumatic, USSR conference, pro- ceedings	20912

	Entry
Children—Continued	
school census, amend D.C. act, re- port	13783
social security childhood disability benefits	13049
State committees for children and youth, how-to-do-it	6012
venereal diseases, immediate treat- ment of minors upon their own consent by Public Health De- partment of D.C.—	
hearing	10008
law	20426
reports	6159, 13786
visually handicapped, home and school programs, developments and trends	19121
your child and health examination survey	9362
see also Child placing—Cripples— Day care of children—Juvenile delinquency—School lunches.	
Children and Youth, Joint Conference on, see Joint Conference on Children and Youth.	
Children's Bureau:	
conference with State and terri- torial health officers, proceed- ings	18290
50th anniversary celebration, ad- dresses	7771
folder series	16915
headliner series	4597
history, 5 decades of action, in- serts	11645, 20366
infant care, bestseller publication, story of development	15093
publication series	174-175, 1927-28, 6014, 7770, 11645-646, 13310-312, 16916-918, 18707, 20366-367.
publications, price list	14656
statistical series	1929, 4599-4600, 6015, 15092
Childress County, Tex., soil survey report	18321
Childs, Charles B.:	
delineation of tracks of heavy cosmic rays and nuclear pro- cesses within large silver chlo- ride crystals	7255
low-pressure mercury arc for ultra- violet calibration	21023
Chile:	
agricultural commodities, agree- ments	3345, 7451, 11321, 14723
Christian Democrats comment on Communist party plenum	714
economic developments, 1962	8408
letters exchanged by Luis Corvalan of Communist Party and Raul Ampuero of Socialist Party	2623
national assembly of popular action front, nine basic objectives in program	2464
natives of Arauco recover their lands	758
Pablo Neruda replies to pastoral let- ter of bishops	6637A
Peace Corps program, agreement	3349
uranium reconnaissance, San Pedro de Atacama and Lago areas	16855
Chileans, popular action front, nine basic objectives in program	2464
Chili Town, N.Y., population, special census	18694
Chilman, Catherine S., helping low in- come parents	15090
Chimneys, and fireplaces	16735
Chin-chi yen-chiu (periodical): translations	12641
Chin Pang Yong, see Pong Yong Jin.	

# INDEX 1963

China :	Entry
Communist—	
abstracts from Soviet journals—	17761, 17767, 19564-565
astronomy —	987, 10765, 12361, 15995
automation and radioelectron- ices—	1032, 8919, 12547-548
biochemistry —	733, 8738, 12545, 14084, 15796, 17975, 19554, 19566, 19600.
biology —	687, 8447, 8723, 15796, 16076, 17975, 19523, 19539, 19554, 19600.
chemistry —	733, 8448, 10766, 19566
electrical and power engineer- ing —	1032, 8635, 12726
electrical, power, radio engi- neering, telecommunications and electronics —	12546, 14377
geography —	847, 8548, 12544, 14405, 15995, 17620
geography and geodesy —	12366
geology —	753, 847, 12362, 14405, 17620
geophysics —	12733, 17620, 17740, 17766, 17977
machine building —	963, 8939, 12726, 19567
mathematics —	744, 854, 12417, 12672, 14349, 16006
mechanics —	987, 10481
metallurgy —	10766, 12360, 14273, 19567
mining —	963, 10434
pharmacology —	19600
physics —	987, 8681, 12367, 12734
plant growing —	19554
soil science —	17740
accounting for basic construc- tion —	14157
accounting of major operation process and accounting state- ments —	14158
activities of prominent personali- ties —	729, 759, 841, 1153, 2624, 2724, 2804, 2970, 5291, 5395, 6745, 6873.
agricultural geography —	2719
agricultural regional division— methodology —	2720
principles and standards —	14139
agricultural sciences, periodicals, bibliography —	12890
agricultural situation, 1963—	10055, 20628
agriculture, animal husbandry and materials —	650, 665, 672, 915, 926, 1031, 1101, 2578, 2608, 2640, 2790, 2835, 5376, 6688, 6737, 6871, 6938, 8457, 8530, 8596, 8618, 8668, 8843, 8982, 10448, 10498, 10527, 10689, 10739, 12387, 12396, 12679, 14183, 14242, 14247, 15755, 15900, 15988, 16091, 16117, 16158, 17757, 17787, 17905, 19384, 19492, 19558, 19663, 19699, 19758, 20795, 20890.
biochemistry developments —	5150
border treaty with Mongolia—	10431, 12369
changes around Fu-hsing Gate (Peking) —	1137
Chuang nationality —	14382
city construction and mainte- nance problems —	14430
climatology atlas —	853
coastal waters, relationship be- tween wind and surface cur- rents —	15665
commercial finance —	14100
communes—	
agricultural technical reform and consolidation —	10410

China—Continued	Entry
Communist—Continued	
communes—continued	
economic plans and geography— incentive to change system—	6864, 2133
communications, postal service, and telecommunications, de- velopment —	2975
Communist developments —	6817
conduct —	18934
constitution, studies —	12273
defector, testimony of Chao Fu, hearing —	334
desert regions—	
coordinated research, reports—	8537, 9017
sand control research —	14395, 17880
digest —	867, 1096, 1140, 1145, 2625, 2805, 5112, 6746, 6783, 6924, 8576, 8613, 10365, 10413, 10817, 12311, 12693, 12760, 14096, 14245, 14427, 16074, 16185, 16197, 17991, 19415, 19553, 20807
dwelling units and room layout in residential buildings —	12449
economic aid and exchange rate— economic development, 1961 —	5405, 6904
economic geography, Southwest— economy —	8438, 6828
education, articles —	2985
electric power —	10831
ethnography and national minori- ties —	960
ethnological information on South China —	664
fiscal laws, etc., 1958-60 —	12589
forage plants, illustrated man- ual —	8853
freight shipments to, interna- tional regulations, Austrian study —	19421
gazetteer, geographical names— gazetteer, Hunan Province —	10273, 916
geography—	
forest plant —	14294
regional economics —	14274
translations —	8694, 10592, 14093, 15753, 15815, 16085, 20916
geology —	12299
Hong Kong boundary, study —	20158
housing units, problems and de- sign —	671
hydrobiology studies —	15673
ichthyology —	15664
Inner Mongolia, achievements in economic and cultural construc- tion, statistics —	2760
inquiry into calculating quantity of value under socialism —	5302
international Communist move- ment —	6953
international developments —	6931, 7077
Korea boundary, study —	20162
labor, transformation of complex into simple —	5177
law of proportionate development is law of development of pro- duction —	845
laws, miscellaneous directives and regulations —	2955
leaders' ideas parallel those of Western militarists, Soviet press opinion —	19633
Lei Feng campaign, pictorial re- port —	16071
Liang-Shan, I Nationality Auton- omous Chou —	781
Liao-ning Province during last decade —	2979
Lien-shan Chuang and Yao Na- tionalities Autonomous Coun- ty, establishment —	2475



# JANUARY-DECEMBER

	Entry
China—Continued	
Communist—Continued	
machine tool construction development	6827
Manass River reclamation district	2843
marine hydrobiology	6682
medical research	16251
meteorology in service of agriculture	15936
meteorology, recent developments	909
mining, fuels and power industry	651, 914, 1030, 1102, 2553, 2699, 2792, 2913, 6739, 6870, 7044, 8456, 8482, 8535, 8842, 8985, 10440, 12547, 12724, 14135, 14181, 15966, 16089, 19382, 19560, 19667, 19742, 20861, 20913.
minorities, mistreatment, Kazakh study	20822
minority nationalities, economic activity	14350
natural resources, transformation	6706
neotectonics conference, USSR report	14217
news agency office in Prague, Chinese protests on closing	19443
North, geographic characteristics, Air Force pamphlet	13202
North, grasslands and meadows	15708
party and cadre education	2980
People's handbook, 1962	8813
personnel organizational and supervisory work	2095
petroleum	814
physical geography	16022
political and sociological information	783, 806, 962, 1034, 1100, 2502, 2526, 2555, 2572, 2636, 2851, 2884, 2899, 2923, 2992, 5127, 5182, 5222, 5232, 5321, 5327, 5338, 5363, 5414, 6689, 6718, 6743, 6815, 6838, 6845, 6929, 6936, 6998, 7025, 7047, 7069, 7131, 8517, 8642, 8667, 8703, 8727, 8732, 8752, 8813, 8829, 8833, 8894, 8915, 8956, 8977, 10840, 10876, 12468, 12640, 12736, 12755, 14153, 14206, 14233, 14250, 14382, 14423, 14426, 15748, 15759, 15929, 15960, 16073, 17631, 17801, 17959, 19376, 19561, 19641, 19674, 19681, 19757, 19765, 20822, 20855, 20895.
production funds, recent problem	2926
propaganda activities in Europe, railroads	17868
Chi-ehr RR	2661
1st electrified AC line	2811
information	8452
Pao-ch'eng railroad construction	2740
use of low alloy rails with increased silicon content	14284
Red China and USSR, State Department briefing	9398
regional stratigraphic table	8898
Russian-Chinese machine translation systems, comparison of old and new programs	8691
science and technology	648, 2503, 2580, 2963, 2993, 5169, 6767, 6920, 7025, 8497, 8917, 8947, 10437, 10443, 10446, 10502, 10516, 10528, 10592, 10614, 10646, 10738, 12348, 12392, 12613, 14309, 14408, 14424, 15800, 15928, 15973, 15996, 16008, 16203, 17711.

	Entry
China—Continued	
Communist—Continued	
science and technology—continued	19392, 19452, 19468, 19479, 19557, 19665, 19737, 20770, 20879.
scientific activities	2971
sea kale cultivation	14415
Shanghai, Nanchang and Tientsin, descriptions	992
Sinkiang Uighur Autonomous Region, natural conditions	10390
Sino-Indian conflict—	
information for commanders	1789
Swiss comment	2768
K'o Chieh-Lang River area	5146
Sino-Soviet dispute—	
effect on Albania	6962
French CP documents	6851
information for commanders	4435
Italian press articles	16260
key issues	11529
Uigur worker speaks out	20843
social production, some questions relating to laws on development	666
South Sea archipelagoes	8783
southern, morphology and development of karst	17772
Southwest, alpine forest, study	15719
Southwestern, Chinese-Soviet zoological-botanical expeditions, results	16231
specialization in higher technological education	8185
staffing procedures and problems	12018
surgery journal, excerpts and tables of contents	912
tax system	6758
towns of Ya-Tung and Kao-ch'an	6638
trade, finance, transportation and communications	652, 913, 1033, 2577, 2621, 2641, 2837, 2886, 5375, 6740, 6869, 6937, 6984, 7092, 8455, 8532, 8599, 8844, 8984, 10439, 10529, 12699, 14182, 14241, 14367, 14378, 15754, 16015, 16090, 16189, 17685, 17754, 17816, 17903, 19374, 19462, 19488, 19666, 19702, 19738, 20799, 20877.
trade unions	19511
Tsinghai-Tibetan Plateau, frozen earth, preliminary studies	8870
viewpoints and attitudes prior to Sino-Soviet talks	19454
violent rainstorms, research on distribution	2810
water and soil conservation	2850
water transportation	7012
women cadres work, improvement needed	6681
People's Republic, see above, Communist Republic—	
agricultural commodities, agreements	1520, 5732, 9432, 9435
scatter wave control facility, construction, agreement	1546
scatter wave radio facility, construction, agreements	1544-45
China news (Chinese periodical): translations on geography	14093
China Sea, see South China Sea.	
China ware, see Tableware.	
Chindgren, Carl J., bomb reduction of vanadium oxide	18100
Chinese, illegal entry in Venezuela	2584
Chinese farmers bulletin, translations	1118
Chinese in United States, social and economic statistics, census of population, 1960	18702

# INDEX 1963

	Entry		Entry
Chinese language:		Christal, Raymond E., JAN [judgment analysis], technique for analyzing group judgment	9622
Communist terms, standard translations, JPRS handbook	19689	Christensen, L. M., improved methods, etc., for producing steel extrusions	9613, 18488
dictionary, Chinese-English, modern Communist China usage	17846	Christian trade unionism in Americas	2525
Chinese People's Republic, <i>see</i> China.		Christian Trade Unions, International Federation of, <i>see</i> International Federation of Christian Trade Unions.	
Ching, Anna M., <i>see</i> Tham, Anne M. K.		Christianity, sacred scriptures, Soviet critique	5424
Ching-chi yen-chiu (periodical): translations	2786, 2897, 10383, 10416, 12433, 15816, 17835, 17921, 19749	Christie, J. R., controlling nematodes in home garden	7561
Ching Hsing Yen, and wife, relief	17086	Christmas, 5-cent commemorative stamp (poster)	20020
Ching River, Ching Chiang flood dispersion, Communist China	5316	Christmas Lake, Inc., conveyance of mineral rights	11996, 17010, 17076
Chiricahua National Monument, general information	5634	Christmas trees, Montana, exports, decline for 3d straight year	20698
Chlorella:		Christopher, Joe F.: Louisiana forest industry statistics, 1962	19273
mutations, USSR studies	16243	pulpwood chipping installations in midsouth	12194
respiration, participation of phosphopyridine nucleotides, USSR study	12638	Christopher Lykes (S.S.): launching ceremonies (remarks)	2262
Chlorides:		Christou, Evanthal, relief	17006, 20548
fixed processes, use in recovering manganese	10338	Chromatography:	
reagent for galena and sphalerite chloridization	20967	apparatus for repeated automatic extraction of porous solids with hot solvent	16802
<i>see also</i> chlorides by name, e.g., Cesium chloride.		gas, analysis of polyphenyl radiolysis products	5948
Chlorination, galena and sphalerite by contact with chlorides	20967	gas, measurement of traces contaminants in space cabin	7293
Chlorine trifluoride, ignition of solid propellants	3144	use of hydrogen-flame ionization detector, Communist Chinese study	15996
Chlorpromazine, effects on EEG activation response	5886	Chromite, mineral industry survey, monthly	3513
Chmielewski, Anna C., relief	15191, 18978, 20400	Chromium:	
Chocolate, <i>see</i> Confectionery.		metallic and magnesium oxide composite, mechanical properties, etc.	14555
Chocolate Mountain Aerial Gunnery Range:		microstructure investigation, USSR study	1104
land withdrawal—		mineral industry survey, monthly—minerals yearbook chapter	18067
law	17049	quantitative analytical procedure for determining in tanning solutions	7547
reports	11805, 17264	Werner type complexes, chemical modification of feather filling materials	11253
Choctaw County, Ala., Tallahatta diatomite	16341	Chromium carbide:	
Chokecherry, livestock poisoning in Western States, reducing losses	14856	alloys, properties, application, etc., USSR study	5167
Cholak, J., toxicity of beryllium	5874	titanium- and chromium-carbide-base cermets, investigating hardness	2845
Cholera, <i>see</i> Hog cholera.		Chromosomes, preparation from human and animal peripheral blood leukocytes	20310
Cholesterol:		Chu-III Mountains, impregnated-streaked semimetallic mineralization in granites	2763
dietary, influence on fatty acid composition of plasma and liver lipid components	1811	Chukchi, Russian SFSR, gold-mining	8711
plasma effect of high fat diet	1761	Chul Soo Yoo, <i>see</i> Yoo Chul Soo.	
plasma, of growing mice, influence of dietary factors	13245	Chung K. Won, <i>see</i> Won, Chung K.	
serum concentrations, Military Academy graduates, trends from 1952 through 1960	13217	Chung-kuo hsün-wen (periodical): translations on geography	14093
uptake, micro method for measuring	70	Chung-kuo Hsün-yen (periodical): translations	6975
Cholinesterase:		Chung-kuo nung-pao, translations	1118
activity, determination, toxicology of organic-phosphor substances, East Germany study	6687	Chung-kuo ti-chih (periodical): translations	15944
anticholinesterase properties of some O-ethyl-S-alkylmethylthiophosphonates	20917	Chunky Creek:	
organophosphorus inhibitors, chemical structure and biological activity, USSR study	10573	flood control, engineer report—departmental edition	2186
serum, changes with combined mustard-gas and organic phosphorus poisoning, USSR study	6765	document edition	1992
Chou Shen, <i>see</i> Shen Chou.			
Chow, Bacon F., absorption of calcium, iron and vitamin B <sub>12</sub> during alterations in environmental temperature	18484		
Chow, W. L., flow structure within constant pressure compressible turbulent jet mixing region	11076		
Choybalsan, H., articles and speeches	5240		

# JANUARY-DECEMBER

	Entry
Church, James D., Navaho missile and booster	7237, 10990
Church, T. W., Jr., survival and growth of 12-year hybrid aspen compared to native Wisconsin stock	15509
Churches, Soviet Union, status of religion and religious groups, Dutch view	15892
Churchill, Winston S.: honorary citizenship—law reports	7825, 6093, 8053
Churchward, P. E., sources and recovery methods for rhenum	12839
Churn drilling, sampling from San Manuel copper mine, Ariz., statistical analysis	18093
Chusovoy, Russian FSR, city of Ural metallurgists	2658
CIA, see Central Intelligence Agency.	
Cicadelloidea, catalogue	1646-51, 7549, 16715
Ciccotelli, Elvira, relief	8035
Ciccolani, Luigi S., orbits returning from moon to specified geographic landing area	11038
Ciepluch, Carl C., effect of composition on combustion of solid propellants during rapid pressure decrease	1314
Cigarettes, industry, outlook for 1963 and review of 1962	4543
Cigars, see Tobacco.	
Ciliary muscle, see Muscles.	
Cimarron River and Valley, channel widening, etc., in southwestern Kansas	19310
Cincinnati, Ohio: consumer expenditures and income, 1960	18031-32
electric facilities of area, map	517, 2266
Greater Cincinnati Airport, Boone County, Ky., weather observations, hourly, decennial census	9500
income, education, and unemployment in neighborhoods	7172
occupational wage survey—departmental edition	12801
document edition	11745
CIO, see American Federation of Labor and Congress of Industrial Organizations.	
Cipher and telegraph codes, idealized and practical pandemonium, USSR study	5312
Circles, tables for integral of circular bivariate normal frequency function	14562
Circuit judges, see Judges.	
Circuits, see Electric circuits—Electronic circuits.	
Circular EC series	4839
Circulars, see names of departments, etc., issuing circulars—also subjects.	
Circulation of blood, see Blood.	
Circulation of money, see Money.	
Circulatory system, see Cardiovascular system.	
Cirrhidae, see Hawkfishes.	
CISC, see International Federation of Christian Trade Unions.	
Cities and towns:	
air pollution—	
and its control	1414
control, role of officials (speech)	3275
ordinances, digest	3278
area redevelopment bulletin	3462
cleaner air through community action	1427

	Entry
Cities and towns—Continued	
community economic structure, role of irrigation development, Grand Valley, Colo., trade area	13035
community improvement under administration of North Worth regional office, programs for	2333
community problem of special employment opportunities and obstacles (address)	19776
construction and maintenance problems, Chinese studies	14430
Cyprus, administrative changes based on municipalities law	6857
data book, errata sheet	4577, 4673
design for action to mobilize resources to help youth enter world of work	3017
elementary schools, conference report	19098
employment program developments in 1961	394
Estonian SSR, industry	5332
farm taxes on rural-urban fringe, Fairfax County, Va., case study	10053
Federal aids to communities, handbook	14932
Federal Government role in metropolitan areas, hearings	6300
Federal statistics for metropolitan areas, information report	1613
Federal wage-hour law operation, general information	20228
Federal water pollution control programs of construction assistance, etc., of river basin planning	7398
finances	16887-888
summary, 1962	16887
grant applications, local review, hearings	17313
helping people to help themselves, overall economic development program	4352
mass transportation act of 1963	
hearings	6290, 7990, 8099
reports	7964, 8049-50
mass transportation, Federal aids available, fact sheet	2364
measuring metropolitan markets, guide to use of Government data	9705
metropolitan areas—	
Federal Government role in New York metropolitan region, hearings	19053
land-use projects, approval of HILFA, hearings	17313
legal problems of planning	3292
outdoor recreation needs, resources, etc.	3248-49, 7382
school facilities planning problems	6337
standard statistical—	
housing census analytical data—	
Abilene-Corpus Christi, Tex.	15036
Dallas, Tex.-Kalamazoo, Mich.	15037
Kansas City, Mo.-Kans. - New Orleans, La.	15038
Newport News-Hampton, Va. - Santa Barbara, Calif.	16879
Ponce-San Juan, P.R.	18646
Savannah, Ga.-Youngstown-Warren, Ohio	16880
United States and division	13272
housing characteristics, 1960 census, advance reports	3504
population mobility, census of population, 1960	18703

# INDEX 1963

Entry	Entry
Cities and towns—Continued	Citizenship Day, bulletin..... 17541
metropolitan areas—continued	Citrus fruit:..... 3720
standard statistical—continued	foreign agriculture circulars..... 2240
social and economic data, cen-	Haines City, Fla., story..... 3551
sus of population, 1960..... 18700	juices, consumer purchases..... 353
structural adaptability to chang-	by family characteristics..... 13146
ing conditions, States' concern	polyethylene film bags, filling with
(paper)..... 7527	fruit..... 20192
wage trends for occupational	production, use, value by States,
groups..... 19806	1961-62 and 1962-63..... 7576
wages and related benefits,	kind breakdown, factors affecting..... 18442
United States and regional	Citrus trees, pests, burrowing nema-
summaries, 1961-62—	tode..... 18442
departmental edition..... 14462	City of New Orleans (vessel):
document edition..... 13444	admit to American registry and
work stoppages..... 3023, 16272	permit use in coastwise trade,
Middle Atlantic States, economic	hearings..... 8098, 15382
effect of textile mill closings..... 11685	City of Refuge National Historical
paying for urban growth (re-	Park, general information..... 16433
marks)..... 19207	City planners, urban planners, exami-
preserving urban open space..... 11368	nation announcement, amend-
public facility loans and grants,	ment..... 11660
Federal laws..... 6573	City planning, <i>see</i> Redevelopment
rural fringe and urban expansion,	(city planning, etc.).
Prince Georges and Mont-	Civic action in Colombia..... 1066
gomery Counties, Md., case	Civil Aeromedical Research Insti-
study..... 19089	tute, reports..... 1849,
rural residents and urban expan-	4502-5, 5955, 7721, 15022,
sion..... 20626	16865-868, 20337.
social problems of development and	Civil aeronautics, <i>see</i> Aeronautics.
urbanization..... 2439	Civil Aeronautics Board:
summary of special censuses, popu-	anniversary (remarks)..... 13315
lation of areas annexed..... 4590-91	annual report, 1962..... 6016
town comes to life, with help of	applications, etc., filed with CAB..... 3458
SBA..... 16559	appropriations, 1964, hearings..... 18919
transportation, comprehensive	continuation, text of 1958 act..... 18712
planning, Governments pro-	efficiency and economy in operation,
gram of encouragement (re-	hearing..... 2056
marks)..... 9784	member, nomination of John S.
urban expansion, problems and	Bradgon, report..... 20541
needs, conference papers..... 14042	orders, economic, E series..... 3997
urban planning assistance pro-	press releases..... 4042
gram, report..... 4141	processing service cases, problems,
urban problems, new solutions	responsibilities, etc. (address)..... 9734
(address)..... 11423	regulations—
urban renewal, question and an-	economic, ER series..... 3610
swers..... 11369	procedural, PR series..... 4110, 11650
USSR, urban medical districts,	reports—
problems of organization, etc.,	economic and safety enforcement
translation..... 17935	cases..... 4603, 16922
water, algae and metropolitan	economic cases, cumulative index
wastes, seminar transactions..... 16524	digest..... 15097
water facilities—	sundry nominations, hearings..... 2090
communities of 25,000 population	weekly summary of orders and regu-
and over, statistical sum-	lations..... 4301
mary, 1950..... 5697	Civil Air Patrol, air reservist
inventory 1958, statistical sum-	(periodical)..... 3440
mary..... 18293	Civil air regulations, <i>see</i> Aeronautics.
water supply and sewage disposal,	Civil aircraft, <i>see</i> Aircraft.
intergovernmental responsibil-	Civil aviation, <i>see</i> Aeronautics.
ities in metropolitan areas..... 4327	Civil Aviation Organization, Inter-
<i>see also</i> Redevelopment (city plan-	national, <i>see</i> International Civil
ning, etc.)— <i>also</i> subjects.	Aviation Organization.
Citizens Advisory Committee on Food	Civil defense, <i>see</i> Civilian defense.
and Drug Administration, re-	Civil Defense Office:
port..... 6474	annual statistical report, 1962..... 7775
Citizens of United States:	Federal guidance for State and
citizens abroad, tax guide..... 2378	local civil defense FG series..... 7777,
medical care, Federal Government's	18713
role in providing..... 17195	handbook for emergencies..... 11653
participation in social welfare pol-	handbook series..... 13317
icy..... 20364	information bulletins..... 3786, 6019
Citizenship:	instructor's guide IG series..... 4606,
and education in public school sys-	11654, 18714
tem of Puerto Rico, interim	leaflets..... 6020
report..... 11893	miscellaneous publications MP
Canal Zone, authorize issuance of	series..... 15100, 18715
certificates, report..... 9870	publications index..... 15100
Federal textbooks on citizenship..... 620-622,	report, 1962—
8360-65, 14043-45, 15628-630,	department edition..... 6018
17542-543, 19343.	document edition..... 6086
obligations for adults (remarks)..... 11358	student manual SM series..... 11656, 13319
publications, price list..... 3266	technical reports..... 9740, 20376
<i>see also</i> Naturalization.	

# JANUARY-DECEMBER

	Entry
Civil engineering:	
basic criteria, Yards and Docks	
Bureau design manual, change-	1599
bibliography on design and con-	
struction of nuclear facilities	4485
Coast Guard reports	18743
index	18743
technicians, determining courses of	
study in vocational educa-	
tion	6346
Civil engineers:	
Air Force (periodical)	3438
Navy (periodical)	3951
Civil liabilities, soldiers and sailors	
civil relief act, amend report	11961
Civil procedure:	
District Courts, rules—	
amendments adopted by Supreme	
Court	4717, 7857
as amended	13662
judiciary and judicial procedure,	
D.C. code of laws, revise,	
codify, enact, report	11838
Civil rights:	
America is for everybody	4831
demonstrations, as part of historic	
world struggle for human	
dignity (address)	19777
equal employment opportunity,	
challenge for business (ad-	
dress)	13342
freedom to the free, 1863 century of	
emancipation, 1963	4609
message from the President	6089, 13458
miscellaneous bills, hearings	18952
print additional copies, reports	20486, 20601
North Carolina equal protection of	
laws, North Carolina State	
Advisory Committee report	6021, 18719
President's program, need for enact-	
ment to meet crisis (address)	14434
public accommodations, eliminate	
discrimination, hearings	17304-305
public schools—	
cities in North and West	181
Southern States, 1962	1935
rights of the people, citizenship	
reader	8364
teacher's edition	8365
teaching about human rights	10081
Washington progress report (ad-	
dress)	16481
Civil Rights Commission:	
appropriations, 1964—	
hearings	11874
report	11848
extend hearings	15394
hearings	11657, 13320
Negro airmen, discrimination re-	
port before Civil Rights Com-	
mission	6022
report, 1963	18718
Civil service:	
adverse action, law and regulations,	
FFM manual supplement	16949
appointments, analysis, public as-	
sistance caseworkers and em-	
ployment security interview-	
ers	20745
apportionment requirement for tem-	
porary summer employment,	
hearing	9947
career opportunities—	
agricultural research in utiliza-	
tion	16723
agricultural statistics	7578
Census Bureau	7746
Coast and Geodetic Survey	13333
Interior Department, directory	
for college students	623
National Center for Health	
Statistics	14657

	Entry
Civil service—Continued	
career opportunities—continued	
State Department positions in	
Washington, D.C.	16570
wage-hour investigator in Labor	
Dept	20226
water supply and pollution con-	
trol	9336
civil service and Nation's prog-	
ress, 1883-1963	1940
civil service journal	3515
employment opportunities, thinking	
about your first job?	9754
examination announcements—	
accountant	7780, 11659, 11661
accountant and auditor	1937, 20377
administrative and management	
positions	1949
agricultural commodity grader	
(fruit, etc.) amdt	18722
agricultural commodity grader	
(meat)	4615, 7784, 18723
agricultural economist, discontin-	
uance notice	9751
agricultural marketing specialist,	
discontinuance notice	16936
agricultural research scientists	15115
agricultural statistician	9762
air traffic control specialist, dis-	
continuance notice	18729
airplane pilot, discontinuance	
notice	4622
analytical and survey statisti-	
cians, discontinuance notice	20381
apprenticeship and training	
representative	20387
architect	4631
discontinuance notice	4621
auditor	7780, 11659, 11661-662
aviation safety officer, discon-	
tinuance notice	4622
bacteriologist	9743
bindery worker	4616, 11658
biochemist	7790, 9743
bookbinder	9763, 18721
budget examiner	11663
clerical positions	193, 7783
coal mine inspector, amdt	16937
correctional officer	194, 9745
corrective therapist, discontin-	
uance notice	187
counseling psychologist, voca-	
tional rehabilitation and educa-	
tion, amdt	9744
current	184-185, 1941-42,
4619-20, 7786, 9749-50, 13324-	
325, 15103, 16942, 18725-727,	
cylinder pressman, amdt	18720
dietitian, amdt	4611
economists	9764
discontinuance notice	9751
education specialist, supervisory	
education specialist, education	
officer, amdt	4614
elementary teachers, Indian Af-	
airs Bureau	1943
employee development officer	16940
employment service adviser	6027,
	11667, 20378
engineers	1944-45
equipment specialists, amdt	9742
exhibits technician and special-	
ist	15101
farm management supervisor	16956
Federal service entrance exami-	
nation, 1964	15111, 18736
fireman	6025, 9747
fishery biologist	11668
foresters	15112
geologists	183, 16955
hospital recreation specialist,	
discontinuance notice	18728
industrial hygienist	16938



# INDEX 1963

	Entry
Civil service—Continued	
examination announcements—continued	
information and editorial positions, visual (still).....	9741
laboratory and clinical technicians in health research, NIH.....	13330
librarians, Veterans Administration installations.....	1938
management analyst.....	11663
mathematical statistician.....	6028
medical microbiologist, discontinuance notice.....	15104
medical officers.....	6026, 16954
discontinuance notice.....	16944
medical technologists in health research, NIH.....	15114
messenger.....	16941
meteorological technician.....	15105
minimum pay amendment.....	1936, 7779
occupational therapist.....	195, 13321
discontinuance notice.....	187-188
operations research analyst.....	196
patent aid.....	1950
personnel officer, position classifier, etc.....	15102
pharmacologists, amdt.....	6035
physical therapist.....	192, 13322
discontinuance notice.....	186-187
plant pest control inspectors.....	1947
plant quarantine inspector.....	1947
policeman.....	6023, 7785
policewoman.....	6024, 9746
positions at certain grades, amdt.....	7778
postmaster.....	1939, 13323
public health biologist, medical entomologist, chemist, discontinuance notice.....	15104
public health educator.....	15117
quarantine inspector trainee, suspension notice.....	20386
readers for the blind, general amdt.....	6031
recreation resource specialists, Outdoor Recreation Bureau etc.....	13331
recreation specialist—amendment.....	4613
discontinuance notice.....	13326
resident in hospital administration, amdt.....	4610
safety and service agent.....	7791
safety inspector.....	7792
scientist administrators and grants associates, salary rates, amendment.....	4626
serologist.....	9743
social administration adviser.....	11667, 20378
social insurance adviser and social insurance research analyst, amdt.....	6027
social insurance research analyst.....	11667, 20378
social workers.....	7781, 18724
social workers, correctional.....	9761
statistician and survey statistician.....	18737
stenographers and typists.....	191, 7794, 18738, 20379
surveying aid and technician.....	4612, 7782
transmitter and receiver operator and maintenance technician.....	182
urban planner, amdt.....	11660
veterinarian.....	16957
discontinuance notice.....	16943
student trainee.....	20385
warehouse examiner.....	16939
wildlife biologist.....	11668
writing and editing positions.....	9748
examinations—	
instructions to applicants—	
postmasters, 4th class.....	4624, 20384
rural carrier.....	6033

	Entry
Civil service—Continued	
examination—continued	
military service or civilian service overseas, special filing privileges.....	1948
places where held.....	9759
sample questions and directions.....	4630, 7789
10-point veteran preference, special filing privileges.....	1948
Federal career service at your service.....	6030
Federal, 80th anniversary press sheet.....	1946
Federal personnel, fund raising for voluntary health and welfare agencies, manual.....	11666, 20382
Federal personnel manual.....	16947
supplements.....	15107-110, 16948-950, 20383
Federal personnel manual system, letters, bulletins, and installments.....	3664
handbook of occupational groups, etc.....	3762
handbook X-118.....	4124
hours of duty, pay and leave, FPM supp.....	20383
Investigation, authorization, report.....	4769
job opportunities—	
local and regional examinations.....	6034, 7788, 11665, 15113, 18731
way to job in Government.....	4629
laws, Executive orders, rules and regulations FPM supplement.....	16950
medical certificates, reviewing and acting on.....	16948
opportunities for returning Peace Corps volunteers.....	13329
position-classification standards.....	4022
position classifiers manual.....	12241
processing personnel actions.....	15107
publications providing useful information on working for Uncle Sam.....	11228
qualification standards.....	4124
recruiter (periodical).....	3516
salary rate for positions in Government under general schedule, amendment.....	189
veterans preference, your civil service veteran preference.....	9756
Washington Agencies Recruiting Conference, proceedings.....	7793
working for U.S.A., applying for jobs, etc.....	9753
see also Civil service pensions—	
Classification—Government officials and employees.....	
Civil Service Commission:	
activities in promoting jobs for qualified handicapped citizens (address).....	18730
appropriations, 1964, hearings.....	18919
commissioner, nomination of L. J. Andolsek hearing.....	10023
efficiency and economy in operation—	
hearing.....	289
report.....	11795
electronic data processing equipment use, hearing.....	17182
health benefits programs of Federal employees, need to curtail over-insurance, etc., GAO report.....	12207
hearing committee members conducting hearings on employee appeals, guide.....	190
interagency training programs.....	4625, 13328
pamphlets.....	4627-29, 9753-58, 13329, 16953, 18732-734
press sheet, 80th anniversary.....	1946

# JANUARY-DECEMBER

	Entry
Civil Service Commission—Continued	
report, 1962—	
departmental edition.....	4617
document edition.....	4709
role in Federal employment.....	18732
Civil service pensions:	
employees, Department of Agriculture, planning your retirement, guide.....	16751
Federal employee facts, retirement system.....	15106
Federal retirement law, questions and answers.....	16953
Government counterclaims, permit recovery—	
hearing.....	9948
report.....	9883
Information for annuitants.....	6032
laws, compilation.....	215
rates, etc., planning for later years.....	21112
retirement act—	
amend relative to Architect of Capitol employees—	
hearings.....	11913, 17329
report.....	11837
amend relative to Panama Canal ship pilots, hearing.....	9946
amended.....	4618
lump-sum payment, define the term child—	
hearing.....	8006
report.....	7954
retirement and disability fund—	
financial condition, improve, hearing.....	20613
report, 1962.....	15187
retirement, FPM supplement.....	15108
retirement report, 1962.....	9760
thirty year retirement at age 55, hearings.....	13820
see also Retirement.....	
Civil service retirement and disability fund, see Civil service pensions.	
Civil strife, duties and rights of states in event of civil strife, report.....	20533
Civil War, 1861-65:	
catalog of books in Army Library, special list.....	5777
centennial, current list of planned observances through 1965.....	18739
naval chronology, pt. 3, 1862.....	7356
our women of 1860's.....	11669
U.S. marines, bibliography.....	16305
Civil War Centennial, commemorative postage stamp (poster).....	14642
Civil War Centennial Commission:	
appropriations, 1964—	
law.....	15158
reports.....	7939, 11951
100 years after, newsletter.....	3988
Civil works, see Public works.	
Civilian defense:	
adult education course—	
illustrations.....	20635
personal and family survival, student manual.....	11656
teacher's manual.....	20643
adult education program.....	12055
appropriations, 1964, hearings.....	18919
basic rescue course, instructor's guide.....	18714
CD newspapers.....	3502A
civil defense and the nurse.....	6020
continuity of corporate management in event of nuclear attack.....	11652
emergency health care, family guide.....	4605
emergency hospital—	
establishing.....	21083
plans and training (paper).....	21080
emergency plans of Government, concern of farmers.....	10140

	Entry
Civilian defense—Continued	
emergency preparedness program, Executive orders prescribing responsibilities of Federal Government.....	13872
engineering skills, mobilizing in nationwide program (address).....	6019
fallout facilities and fuels on farms in Central and Southern States.....	13092
fallout shelter program—	
hearings.....	11882, 15300, 17163
reports.....	17133-134
fallout shelters, guidelines for care of—	
infants and children.....	11642
newborn infants and mothers.....	11643
farm emergency action planning steps.....	10144
Federal civil defense act of 1950, as amended.....	16924
Federal civil defense guide.....	9737-38, 13316, 16924-933, 20374-375
Federal guidance for State and local civil defense, FG series.....	7777, 18713
Federal stockpile inventory, report.....	3415
Federal surplus personal property acquisition.....	6570
handbook for emergencies.....	11653
health aspects, medical self-help training program for you and your community.....	21089
houses, reducing vulnerability.....	18716
incorporation of shelter into schools.....	9739
information bulletins.....	3786
motion picture catalog.....	18715
national program, improvements in status (address).....	7776
nonmilitary emergency preparedness effort of Federal Government and mobilization of resources (address).....	392
nuclear and coal-fired power plants compared as to nuclear defense capabilities.....	4476
program, highlights.....	15099
publications, price list.....	9335
radiological defense textbook.....	13319
radiological monitors in shelters, etc., handbook.....	16934
rural civil defense—	
carried through home economics programs.....	10126
4-H, club leader's guide.....	10125
knowledge for survival, newsletter to extension program leaders.....	8227
you can survive, fact sheets.....	10128-147
rural fire defense preparation for survival.....	4370
student manual SM series.....	11656, 13319
study of food and beverage supplies in retail stores, 1962.....	1708
USSR—	
activities, translations.....	6872, 10415, 12616-617, 17751
handbook.....	6958
welfare service, voluntary agencies' role.....	21178
Civilian nuclear power, report to the President, 1962.....	142
appendices.....	11586
Civilian personnel qualifications inventory and referral system.....	17345
Civilians:	
civilian personnel pamphlets.....	4443-50, 5909, 18541
Defense Dept., permanent change of station, travel and transportation regulations.....	20305

# INDEX 1968

	Entry		Entry
Civilians—Continued		Claims—Continued	
experienced, labor force—		war damage, Philippines, payment—	
industry, census of population,		law	17024
1960, supplementary reports—	1881	report	13598
occupations, census of popula-		see also Unemployment Insurance.	
tion, 1960, supplementary re-	4575	Clamps, clamping devices, Polish	
ports		study	8610
Cladding:		Clams:	
fuel, stainless steel tubing, evalua-		certified shippers	3506
tion	5933	soft-shelled, effects of sub-steriliza-	
nuclear superheat fuel, remarks		tion doses of radiation on stor-	
concerning materials	5932	age life extension, final sum-	
stainless steel, from cold-swaged		mary	4486
and rolled fuel rods, examina-		Clapp, Norman M., address, Jan. 15,	
tion of metallurgical and me-		1963	9375, 13038
chanical properties	7695	Clapp, William F., marine borers,	
vacuum, refractory metals, USSR		bibliography	12945
study	19546	Clarion County, Pa., coal carbonizing	
zirconium 1.5 w/o niobium, evalua-		properties	16333
tion in boiling water reactor		Clark, Ann:	
environment	9677	brave against enemy	19345
Cladocera, see Water fleas.		sun journey, story of Zuni Pueblo.	10308
Clague, Ewan:		Clark, Dale A.:	
addresses, etc.—		apparatus for repeated automatic	
Nov. 28, 1962	1184	extraction of porous solids	
Jan. 10, 1963	10911	with hot solvent	16802
Jan. 19, 1963	5461	changes in serum lipid concentra-	
May 16, 1963	16293	tions with age in young men	9628
Sept. 17, 1963	18030	extraction apparatus for determi-	
Sept. 27, 1963	20932	nation of total serum lipids	4420
Clalborne County, Miss., soil survey		micro method for measuring cho-	
report	18320	lesterol uptake	70
Claims:		Clark, Frank L.:	
Alaska public works act, settle-		lifting reentry configurations	11004
ment report	17251	real-gas hypersonic-nozzle flow pa-	
bankruptcy, creditors, filing, amend		rameters for nitrogen in ther-	
act, reports	7924, 20593	modynamic equilibrium	20997
Brandaris Insurance Co., settle-		Clark, Harold F., economic and so-	
ment against members of U.S.		cial background of vocational	
Armed Forces, agreement with		education in U.S.	13846
Germany	13079	Clark, Leonard V., vacuum effect on	
collisions between vessels, liability		penetration characteristics	
apportionment, unify, hear-		projectiles into fine particles	3140
ings	15379	Clark, P. M., power conversion, unit	
damages to property, etc., proposed		study	14977
appropriations to pay	7866, 9956	Clark, W. W., alkaline battery evalua-	
Federal agencies, general proce-		tion	7594
dures, GAO guidance manual	584	Clark Canyon Dam, waters im-	
financial matters, agreement with		pounded, designate Hap Hawk-	
Bulgaria	18331	ins Lake, report	13711
Foreign Claims Settlement Com-		Clark County, Nev., public lands, sell	
mission, programs adminis-		for use as privately owned	
tered, memorandum	8109	golf course, report	15317
Government counterclaims, set off		Clark Fork quadrangle, geology	17523
of moneys in civil service re-		Clarke, H. G., Jr., structural integrity	
tirement fund—		of shipping containers for ra-	
hearing	9948	dioactive materials, etc.	5941
report	9883	Clarke, James W., geophysical ab-	
shipowners, limit liability, hear-		stracts	3754
ings	15379	Clarke, Katherine G., health studies	
small claims actions in D.C. court,		of human populations	1429
time for hearing—		Clarke County, Ala., Tallahatta diat-	
law	17015	omite	16341
reports	13624, 13732	Clarksville, Mo.:	
social security benefits, right to		Mississippi River navigation proj-	
question decision	11284	ect, engineer report—	
tort—		departmental edition	435
Canal Zone Government, expand		document edition	264
authority to settle, report	11823	Clary, Robert R., natural frequencies	
civil actions, venue of District		of uniform rectangular-cross-	
Courts, reports	11846, 20595	section free-free sandwich	
claims act, amend, report	11823	beams	20989
Trust Territory of Pacific Islands		Classification:	
residents, report	7914	area labor supply criteria	19123
unformed services and civilian em-		Army enlisted personnel, new tech-	
ployees of U.S., settlement, re-		niques, status, June 30, 1962	4465
port	13581	curriculum guides and related pub-	
war claims act, administration, in-		lications	8171
vestigation—		decimal, additions, notes and deci-	
extension, report	6262	sions	3589
report	8075	Library of Congress—	
		additions and changes, quarterly	
		list	3820

# JANUARY-DECEMBER

	Entry		Entry
Classification—Continued		Cleaning compounds:	
Library of Congress—Continued		detergents for home laundering.....	18424
class A, general works, poly-		detergents to comply with stand-	
graphy.....	9086	ards of degradability, require-	
class M, music and books on		ments, hearings.....	13824
music.....	10928	synthetic detergent industries, out-	
class Q, science.....	9087	look for 1963 and review of	
Library of Public Documents Divi-		1962.....	4542
sion, G.P.O., explanation of			
system.....	9329	Clear Fork:	
NASA publications, change notices.....	14537	flood control, engineer report—	
Navy—		departmental edition.....	404
enlisted personnel, classification		document edition.....	244
codes, manual.....	7361	Clear Lake National Wildlife Refuge:	
enlisted personnel, manual.....	16455	administration—	
position classifiers, manual.....	12241	hearings.....	10017
President's Committee on Equal		report.....	13757
Employment Opportunity, docu-			
ment filing manual.....	18271	Clearfield County, Pa., coal carboniz-	
principles and policies, positions in		ing properties.....	16333
Federal service.....	15116	Clearing of land, equipment for clear-	
scheme for elementary and second-		ing brush.....	1694
ary school textbooks.....	12060	Clearinghouse Exchange:	
standard industrial use in distribu-		publications of State departments	
tive education.....	17394	of education—	
see also Government officials and		elementary education person-	
employees—also names of sub-		nel.....	17360
stances, objects, etc., classified.		secondary education personnel.....	17361
Classification bulletin, Patent Of-		Clearinghouse for Research in Child	
fice.....	1381-82,	Life.....	11647
	7383, 14638, 16475-477,	Clearly, Ansel R., address, Nov. 29,	
	20017	1962.....	94
Classification tests, see Aptitude tests.		Clearly, Charles J., awards for papers	
Classifying rangelands for conserva-		on materials sciences.....	57
tion planning.....	21	Clegg, Arthur, organic matter im-	
Clay, Eleanor W.: list of available publications of		portant in field analysis of soil	
Agriculture Department.....	17545	texture.....	12174
monthly list of publications and		Clemens, Howard P., bioassay and use	
motion pictures.....	3916	of pituitary materials to	
Clay, J. W., soil survey report,		spawn warm-water fishes.....	2298
Mathews County, Va.....	1504	Clement, Wendell E., use and promo-	
Clay:		tion of dairy products in public	
beneficiation, hydrocyclone appli-		eating places.....	18433
cation.....	16345	Clergy:	
construction products, current in-		social security for clergymen, gen-	
dustrial reports.....	3574,	eral information.....	18313
halloysitic, Pacific Northwest, phys-		working abroad, social security	
ical and chemical properties.....	10947	coverage.....	10317
methods for producing alumina with			
5 hydrochloric acid processes,		Clerks:	
evaluation.....	3091	Army course, evaluation of tests	
minerals—		to predict success.....	14948
adsorption of cesium.....	5017	curriculum for manpower develop-	
in Morrison formation of Colo-		ment and training program.....	2161
rado Plateau.....	600	examination announcement.....	193, 7783
in Triassic rocks of Colorado		see also Disbursing clerks.	
Plateau.....	10296	Clesner, Herschel F., patent practices	
minerals yearbook chapter.....	19826	of Department of Interior, pre-	
produced from alumina, potassium		liminary report of Subcommittee	
alum process, evaluation.....	19862	on Patents, Trademarks,	
producing alumina by sulfuric acid		and Copyrights.....	331
processes.....	10962	Cleveland, Harlan, address, May 8,	
refractory—		1963.....	14710
beneficiation feasibility.....	3097	Cleveland, Merrill L., evaluation of	
Haldeman and Wrigley quad-		polybutenes as miticides.....	1624
rangles, Ky.....	5016	Cleveland, Ohio:	
see also Montmorillonite—also		consumer expenditures and in-	
names of articles manufactured		come, 1960.....	12787-788
from clay.		electric facilities of area, map.....	517,
Clay Committee, see Strengthen Se-			2266
curity of Free World Commit-		Erieview urban renewal project I,	
tee.		large scale demolition, prema-	
Clay County Hospital, relief.....	7912	ture approval by Urban Re-	
Clayton, Rebecca K., relief.....	15201	newal Administration, GAO re-	
Clayton act, see Monopolies.		port.....	14002
Clean water.....	12985	harbor improvements, engineer re-	
Cleaner air through community ac-		port—	
tion.....	1427	departmental edition.....	413
Cleaning:		document edition.....	234
equipment and supplies, Federal		Hopkins Airport, weather observa-	
item identification guides for		tions, hourly, decennial cen-	
supply cataloging, supplement.....	3657	sus.....	1592, 9501
windows, comparison of State		income, education, and unemploy-	
safety codes with ASA, chart.....	16269	ment in neighborhoods.....	9068
see also Laundry and laundries.			

# INDEX 1963

Entry	Entry
Cleveland, Ohio—Continued	Clinics:
occupational wage survey—	outpatient psychiatric services in
departmental edition.....	U.S., 1961—
document edition.....	patients data.....
14460	staff and man-hours data.....
Cleveland, Tenn., consumer expendi-	psychiatric—
tures and income, 1960.....	outpatient, demographic and
14460	psychiatric characteristics, 1961.....
Clifton, John P., building success in	reporting outpatient services, in-
small manufacturing indus-	structions.....
tries.....	therapeutic methods used in treat-
1462	ment of terminal states.....
Clifton, N.J.:	8803
occupational wage survey—	Clopes, P. G., vacuum arc melting and
departmental edition.....	casting of copper.....
document edition.....	14519
15178	Clocks and watches:
Clifton quadrangle, Wyo. and S. Dak.,	radium dial-painters, cytogenetic
geology.....	study.....
20727	13214
Climate:	watch movements, Tariff Commis-
artificial control of large and small	sion report.....
areas, USSR study.....	16628
Chinese climatology atlas.....	Close, Kathryn, Cuban children away
853	from home.....
climatography, Florida.....	6013
3399	Close, Marion C., remarks, May 13,
climatography of United States—	1963.....
climates of States.....	11526
3399	Closures for containers, current in-
climatic summaries of resort	dustrial reports.....
areas.....	3574, 13291
9489, 14774, 18367	Cloth, see Textiles—also names of
decennial census of U.S. climate, 1592,	textiles.
7507-14, 9493-9502, 11386-406,	Clothing:
13118-127, 14779-798, 16658-666,	and individual equipment, Federal
20233-243, 21155-175.	item identification guides for
climatological data—	supply cataloging, supple-
Antarctic stations, 11380, 14775, 16656	ment.....
Arctic stations.....	3659
9490	anti-exposure assemblies, field
by States, etc.....	tests.....
3517	1752
local.....	apparel survey, current industrial
3876	reports.....
3518	1889
history of climatological record	arctic, accumulation of static elec-
forms 1009 and 612-14.....	tricity.....
14799	14912
hot, effect on functions of digestive	current industrial reports.....
organs, USSR study.....	13288
20771	garment industry labor irregulari-
hot, physiology of blood of humans	ties and discrimination, inves-
and animals, USSR study.....	tigate, hearings.....
19707	2048
Hungary, Bukk plateau, micro-	general repair, techniques, Army
climatic measurements on	technical manual.....
Great Meadow.....	9663
17748	laundrying, cleaning or repairing
Kwangsi Province, Communist	establishments, fair labor
China.....	standards act, Interpretative
1117	bulletin.....
3909	11378
Navy marine atlas, Arctic Ocean.....	men's apparel, current industrial
12961	reports.....
published data sources prepared	3574
by Weather Bureau, guide.....	retail apparel, etc., stores, employee
20245	earnings—
State climatic divisions, monthly	departmental edition.....
averages, 1931-60, decennial	document edition.....
census.....	2013
14781	Tatar ASSR, conference on sewing
upper air climatology as related to	industry problems, USSR re-
design and operation of super-	port.....
sonic aircraft.....	15881
11381	women's apparel, current indus-
see also Bioclimatology—Weather.	trial reports.....
Climatic atlases, see Atlases.	3574
Climatic Laboratory, temperature	see also names or types of clothing.
tests of YHU-1D helicopter,	Cloture, Senate, present rules, history,
category 2, evaluation.....	etc.....
11476	17194
Climatography, see Climate.	Cloud, Preston E., Jr., environment
Climatological observers, see Meteor-	of calcium carbonate deposi-
ological observers.	tion west of Andros Island,
Climatology, see Climate.	Bahamas.....
Climax Molybdenum Mine, stresses	604
around underground opening,	Cloud modification, see Weather con-
determination.....	trol.
3094	Cloud seeding, see Weather control.
Clinical Center, National Institutes	Clouds:
of Health:	interpretation from satellite alti-
description.....	tudes.....
19960	21009
diet manual.....	noctilucent, Russian papers.....
12904	orographic cloudiness in stable and
nursing.....	unstable atmosphere, hydrody-
11108	namic calculation, USSR
patient admission procedures.....	study.....
11103	10820
Clinical laboratory procedures, bac-	physics, research use of instru-
teriology and mycology.....	mented drones, evaluation.....
9267	21057
Clinical medicine (USSR periodical):	storm, vertical motions, USSR
translations.....	study.....
5348	17898
Clinical picture and therapy of in-	supercooled, crystallization.....
toxication by pesticides,	20787
USSR.....	
17669	
Clinical Research Center, agreement	
with Thailand.....	
14722	
Clinical thermometers, see Thermom-	
eters.	



	Entry		Entry
Clouds—Continued		Coal—Continued	
television photography from TIROS II, meteorological satellite data, catalog	14800	preparation characteristics—con.	
television photography from TIROS IV, meteorological satellite data, catalog	11407	Nicholas County, W. Va.	3093
whiteout seeding procedures, investigation	19134	Tazewell County, Va.	19868
Coagulation, <i>see</i> Blood.		pulverized coal-fired furnace, process development in removing sulfur dioxide from hot flue gases	20964
Coal:		rare elements in coal	10940
Alabama, research and technologic work, bibliography	19837	report, weekly	4293
analyses of tippie and delivered samples	18104	reserves, Eastern Kentucky	5014
anthracite—		resources—	
calcined, use in foundry cupolas	16339	Belmont County, Ohio	19314
Pennsylvania—		Salysersville North quadrangle, Ky.	10274
distribution 1961-62 coal year	3052	Roslyn, Wash., steeply pitching coalbed, hydraulic mining research	18095
distribution, 1962-63 coal year	20945	spontaneous heating, effects of hydraulic fluids	10954
mineral industry surveys, weekly	4012	structure, densimetric method in studying	19858
minerals yearbook chapter	1198, 19827	subbituminous deposit, Beluga River coalfield, Alaska	19857
production, preliminary estimate, monthly	4013	western blends, coking-rate study	19861
uses of large-diameter auger in underground mining operations	3092	Coal beds, <i>see</i> Coal.	
bituminous and anthracite, hydrogasification	3083	Coal chronicle (periodical)	16320
bituminous coal and lignite—		Coal dust, float dust deposits in return airways	7208
distribution, 1962	14492	Coal mine inspectors, examination announcement, amendment	16937
distribution and marketing, changing patterns, 1960-62	12822	Coal mines and mining:	
distribution, quarterly	14491	bituminous, underground and surface, industry wage survey	19794
gasification using nuclear heat	11565	escapeways and other emergency measures	1202
bituminous, gasification with oxygen in pilot plant equipped for slurry feeding	1251	Federal coal-mine safety act, administration, 1952-62	19838
carbonization, hydrogenation of pitch	3082	Federal safety act and codes, interpretations and applications	9111
carbonization products, properties of compounds	9109	hydraulic coal mining research, tests in steeply pitching coalbed, Roslyn, Wash.	18095
carbonizing properties—		industry, role in power production (address)	10309
Elk, Clarion, Jefferson, Clearfield, and Centre Counties, Pa.	16333	injuries and employment, monthly report	3519
Kanawha County, W. Va.	14510	injury experience, analysis of safety factors, etc., 1960	1207
chemicals—		open-cut mining, subbituminous deposits, Beluga River coalfield, Alaska	19857
mineral industry survey, monthly	3522	pneumatic vibrating-blade planer, test operation	3095
minerals yearbook chapter	20942	pyrites, oxidation	14512
coal chronicle, recently published items, summaries	16320	West Virginia spoil banks, poor growth of poplar	20700
flash irradiation	14523	<i>see also</i> Mine ventilation.	
foreign trade reports	4258	Coal Research Office:	
geology, Seitz quadrangle, Ky.	598	annual report, 1962	11670
Haldeman and Wrigley quadrangles, Ky., resources	5016	function (remarks)	11671
hydroxyl content, determination by forming trimethylsilyl ethers	9110	press releases	4043
international trade, monthly inventory	3796	Coal tar:	
materials inhibitory to growth of microorganisms	18097	imports of products, 1962	16625
Mines Bureau research and technologic work	14498, 12834	low temperature, vapor phase oxidation of hydrocarbons	10955
Mount Gran deposits	12834	phenols in, determination by forming trimethylsilyl ethers	9110
performance of screw-type, classifier-cyclone combination	1247	Coal washing:	
Pittsburgh-bed coal, oxidizing effect of processing temperature and time	14522	equipment, concentrating tables, performance characteristics	12836
plastic, agglutinating, and free-swelling properties	7204	fine, unsized, cleaning in dense-medium cyclone pilot plant	16344
Pocahontas no. 3 coalbed, longwall mining with German coal planer	19863	use of sieve bend and scalping deck with vibrating screen in dewatering and draining dense medium from fine coal	20968
preparation, aqueous slurries, bibliography	14497	Coast and Geodetic Survey:	
preparation characteristics—		charts and publications, catalog	7795
Kanawha County, W. Va.	19867	Commissioned Officer Corps, scientific careers	20389
Mercer County, W. Va.	10960	function as central depository for geomagnetic data, etc., hearings	4756

# INDEX 1963

	Entry
Coast and Geodetic Survey—Continued	
hydrographic manual.....	11673
legislation, hearing.....	12009
magnetograms MHV series.....	197
4633-34, 7796, 9765, 15118, 16959, 20388, 11672,	
one-day program in photogramme- try for engineering students.....	1952
personnel—	
retired, medical care—	
law.....	15150
report.....	11828, 11967
transfer to Air Force in emer- gencies, report.....	11966
press releases, CGS series.....	4044
publication series.....	198
1953-54, 7797, 11673, 13332	
serve and explore.....	13333
special publications.....	1955, 4635
technical bulletin.....	1956
see also Pay, allowances, etc.	
Coast Guard:	
appropriations, merger, report.....	11835
appropriations, require authoriza- tion—	
law.....	13419
reports.....	6115, 11975
Atlantic merchant vessel report (AMVER) system.....	11676
aviation facility requirements and aircraft utilization, opportu- nities for economies, GAO re- port.....	15596
career for licensed officers of mer- chant marine.....	4638
civil engineering reports.....	18743
index.....	18743
Coast Guard reservist.....	3520
communication manual.....	11681
court martial cases, report 1962.....	8134
enlisted personnel, retirement—	
percentage limitation, remove—	
hearing.....	13798
law.....	17044
reports.....	11974, 15254, 17120
provisions, unusual aspects, GAO review.....	5005
equipment lists.....	4639
International Ice Patrol.....	11678
legislation, hearing.....	12009
manual, national search and rescue, amendment.....	7800
merchant marine officers, opportu- nity in.....	199
nautical schools, rules and regula- tions.....	11679
officers promotion system, estab- lish—	
hearing.....	15380
law.....	18777
reports.....	15244, 17274
officers, registers.....	18744
organization manual.....	4643
origin, responsibilities, relation- ships, and direction.....	4644
publications, price list.....	1398
roles and missions—	
report sections.....	15120
study sections.....	15121
rules and regulations for number- ing undocumented vessels and reporting of boating accidents.....	11680
rules covering anchor lights and fog signals in special anchorage areas, amend—	
hearing.....	13798
law.....	17014
reports.....	11829, 11965
subcommittee bills, hearing.....	2056
sundry nominations, hearings.....	2090
Coast Guard Academy, New London:	
cadet profile, classes of 1964-66.....	13335
catalog of courses, 1963-64.....	7804

	Entry
Coast Guard Academy—Continued	
information for candidates.....	6043
information leaflet.....	9769
physical examination instructions and requirements for candi- dates for appointment as cadets.....	9767
Coast Guard Reserve, register of offi- cers.....	7801
Coast Guard vessels, see Ships.	
Coast pilots:	
United States coast pilot.....	1957
supplements.....	4636-37, 6036-39, 7798
Coastal Engineering Research Board, establish, reports.....	13708, 18905
Coastal Engineering Research Center, establish, reports.....	13708, 18905
Coastal plain, see Atlantic States.	
Coastal warning facilities charts:	
Cape Hatteras, N.C., to Brunswick, Ga., 1963.....	11382
eastern Florida.....	3400
Eastport, Maine, to Montauk Point, N.Y., 1963.....	14776
Eureka to Point Conception, Calif., 1963.....	11383
Montauk Point, N.Y., to Manas- quan, N.J., 1963.....	13116
Morgan City, La., to Apalachicola, Fla.....	5770
Morgan City, La. to Brownsville, Tex., 1963.....	14777
Point Conception, Calif. to Mexican border.....	9491
Coasting trade, Virgin Islands, non- applicability of foreign dredge act, opinion of Attorney Gen- eral.....	19774
Coasts, facilities design, Yards and Docks Bureau design manual, change.....	1600
Coates, John B., jr.:	
internal medicine in World War II—	
infectious diseases.....	9666
malaria.....	11551
thoracic surgery in World War II.....	5920
Coates, Neil H., centrifugal compres- sor for high-temperature helium.....	16342
Coating and Chemical Laboratory, reports.....	12963, 18264, 21064
Coating materials:	
deposition of vacuum coatings by means of electron bombard- ment.....	18180
electroplated coatings, cermet, for oxidation protection of sub- strates in excess of 2000°F.....	86
frictional characteristics at elevated temperatures.....	4496
gas-flame coatings, structure and properties, USSR study.....	2602
organic coating using fluidized bed technique.....	20014
protective—	
inadequate interior coating for fuel truck tankers, unneces- sary costs incurred by Army Dept., GAO report.....	20723
reinforced porous ash concrete items, USSR study.....	6910
steel piling, test results.....	13135
see also Aluminum.	
Coats:	
fitting coats and suits.....	13167
women's and misses', industry wage survey.....	14477
Coaxial directional couplers, Narda 3003-10, -20, -30, 9300, 14636, 21061	
Cobalt:	
alloys, hydrogen effect on stress-rup- ture and fatigue properties, pre- liminary investigation.....	1287

# JANUARY-DECEMBER

Entry	Entry
Cobalt—Continued	Coefficients:
corrosion in air and oxygen..... 10964	aerodynamic, from Newtonian ex-
determination in tungsten by com- bined ion exchange X-ray spec- trographic method..... 20965	pressions for conic and spheric bodies at combined angles of attack and sideslip..... 11089
hysteresis loop of cobalt-nickel ferrites..... 20314	directional correlation attenuation coefficient tables for combined magnetic dipole and randomly oriented electric quadrupole interactions spin of inter- mediate nuclear state..... 7712-13
metallic binders..... 16334	numerical procedure for shock and Fourier analysis..... 3225
mineral industry survey, monthly- minerals yearbook chapter..... 18068	Coeur d'Alene mining district, geology of quadrangle at southwest corner, descriptive report..... 6550
reclaiming S-816 high-temperature alloy scrap..... 10963	Cofer, Eloise, family food plans and costs..... 1698
separation and recovery by solvent extraction and electrorefining..... 5486, 9118	Coffee:
COBOL, <i>see</i> Electronic computers.	foreign agriculture circulars..... 3720
Cochabamba Valley feud necessitates intervention of Armed Forces..... 2604	international agreement, 1962— hearing..... 8107 reports..... 18969
Cochiti Reservoir, make water avail- able for pool for recreation, re- port..... 11997	international agreement act of 1963, reports..... 20478, 20484
Cochran, Andrew A.: autoradiography of carbon and sul- fur in titanium steels..... 3080	producing countries, situations, programs and policies..... 13981
radiotracer studies of cerium and sulfur distribution in steel..... 14521	Coggins, James L., discharge effects in cesium diode..... 9597
Cocke, Joseph B., one-bale capacity seed cotton container for use at cotton gins..... 18401	Cogle, B. A., transfer of land title in Marengo County, Ala..... 13468
Cockpits (aircraft): displays for all-weather landings, control-display integration pro- gram..... 5876	Cohan, Henry H., relief..... 13514
displays for pilot control during hy- personic lifting reentry..... 5859	Cohany, Harry P.: disciplinary powers and procedures in union constitutions..... 18038
Cockroaches, control, description, etc..... 30	unaffiliated local and single-em- ployer unions in United States, 1961..... 1178
Cocks, Charles A., Missouri Basin Inter-Agency Committee meet- ings..... 9137, 16351, 20975	Cohen, Allan J., nuclear electrogen- erator cells that use cerium 144 beta-emitting radioisotope sources..... 21003
Codd, A. R., water supply outlook and Federal-State-private coopera- tive snow surveys for Montana and northern Wyoming..... 4287	Cohen, Bernard, salinity of Delaware estuary..... 611
Code of Federal regulations..... 4904-25, 6410-35, 8242-55, 10165-170, 12114-117, 13925-931, 15501- 502..... 15501	Cohen, George: chemical modification of feather filling materials with Werner type chromium complexes..... 11253
index 1963..... 15501	Tan-O-Quil-QM process for chemi- cal modification of feathers..... 11252
publication techniques, improve, reports..... 6152, 9965	Cohen, Ira M., theory of spheri- cal electrostatic probes in slightly ionized, collision-dom- inated gas..... 18577
<i>see also</i> for titles, chapters, etc., of the code printed separately, subject involved.	Cohen, Nathan M., library science dis- sertations, 1925-60..... 17380
Code words, selection of code names for communication systems..... 1770	Cohen, Nathaniel B., boundary layer similar solutions and corre- lation equations for laminar heat-transfer in equilibrium air, etc..... 19943
Codella, Assunta D., relief..... 9854, 13401, 13691	Cohen, Philip, specific-yield and par- ticle-size relations of Quater- nary alluvium, Humboldt River Valley, Nev..... 14036
Codes, converting multidigit to one digit code, method..... 8817	Cohen, Wilbur J.: grants-in-aid and other financial as- sistance programs administered by Health, Education, and Wel- fare Dept..... 17537 library services..... 2160
<i>see also</i> Codes of law— <i>also</i> names of departments, etc., issuing codes— <i>also</i> headings beginning Code— <i>also</i> subjects.	10th anniversary of Department of Health, Education, and Welfare..... 12239
Codes of law:	Cohn, Stanley H., gross national product in Soviet Union, com- parative growth rates..... 7734
District of Columbia, 1961 edition, supp..... 6200	Coin-operated machines, <i>see</i> Juke- boxes.
Mongolia, civil code..... 12430, 12593	Coins, commemorative, legislation, hearing..... 11887
United States— 1958 edition, supp..... 7818, 9798, 16970	
revision and codification, study— authorization, reports..... 6261	
résumé of activities..... 9971	
<i>see also</i> subjects.	
Codfish:	
biology of <i>Gadus morhua</i> and re- lated species, bibliography..... 12137	
line-trawl fishery, Chatham, Mass..... 17450	
Codling moths, control in apple orchards, comparative effective- ness of insecticides..... 20261	

# INDEX 1963

	Entry		Entry
Coke:		Cold Regions Research and Engineering Laboratory:	
mineral industry survey, monthly-	3522	research reports-----	2188-89,
minerals yearbook chapter-----	20942	4840-42, 6362, 19133-134	
structure, densimetric method in		science and engineering-----	19138
studying-----	19858	engineering-----	2190
Coking-rate study on commercial		physical science-----	4843-44,
blend of western coals-----	19861	technical reports-----	12080-87, 19135-137
Colbert County, Ala., forest inventory		Cold storage:	
statistics-----	3379	frozen food locker cooperatives,	
Colburn, Evelyn W., apparel survey,		appraisal-----	19158
1961-----	1889	regional holdings, summary, 1962-	9450
Colby, Bruce R., fluvial sediments,		report (periodical)-----	3523
source, transportation, deposition,		supply facilities, Yards and Docks	
and measurement of sediment		Bureau design manual, change-	1601
discharge, summary-----	19301	Cold war, <i>see</i> International relations.	
Cold:		Cold war GI bill-----	12026
absorption of calcium, iron and		Cold war veterans' readjustment as-	
vitamin B <sub>12</sub> during exposure-----	18484	sistance act-----	13761
acclimatization, effects on--		Cole, Allen E., density distribution,	
liver dl- and triphosphopyridine		interlevel correlations and vari-	1750
nucleotide-----	11498	ation of wind-----	6336
pulmonary function of rats dur-		Cole, Charles B., jr., flexibility in	
ing norepinephrine calorigen-		undergraduate curriculum-----	19934
esis-----	18474	Cole, Henry A., jr., dynamic response	
acclimatized rats, cardiovascular		of hammerhead launch vehicles	
effects of norepinephrine-----	13206	to transonic buffeting-----	1285
combined with ultraviolet irradi-		Cole, P. T., application of modulari-	
zation, building up resistance,		zation concept to satellite tape	
USSR study-----	14120	recorders-----	5922
effect on--		Cole, R. H., high-strength ternary	
adrenal weight of mice-----	18475	and quaternary thorium-uran-	
blood volume and metabolite		ium base alloys-----	10289
levels-----	14910	Cole, W. Starrs, Tertiary larger	
host-parasite interactions-----	18489	Foraminifera from Guam-----	
output of epinephrine and nore-		Coleoptera, <i>see</i> Weevils.	
pinephrine-----	16804	Coll group, <i>see</i> Coliform organisms.	
resistance of mice to Cocksackie		Coliform organisms, paraagglutinat-	
virus infection-----	14911	ing E. coli strains ability to	
effects of acetylsalicylic acid on		stain by fluorescent sera of	
man's skin temperature in cold		different specificity, USSR	
environment-----	18481	study-----	12370
environment, interrelationship to		Collapse phase of early solar evolu-	
immunity and resistance to in-		tion-----	3159
fection-----	14908	Collecting of accounts, retail credit	
exposure--		and collections, bibliography--	21106
alterations of cytochrome c		Collective bargaining:	
levels-----	18480	agreements, escalator clauses, Oct.	
animals, alterations in protein		1962-----	3035
metabolism-----	11501	Alaska R.R. and its employees,	
exposure and protein intake, ef-		encourage, report-----	11998
fect on liver enzymes asso-		employers and unions entering into	
ciated with amino acid metab-		relationship for 1st time, in-	
olism-----	11502	formation (address)-----	11113
interrelationships of amino acid		fishermen's and fish shore workers'	
imbalances-----	11503	union, voice in ex-vessel sale of	
mice, source of secondary invad-		fish, hearings-----	4773, 19046
ing staphylococci-----	14909	future strengthening of economy	
potentiation of endotoxin in		and government assistance	
mice-----	18477	(address)-----	5427
hypoxia, induced, effect on thermo-		in free society (address)-----	1340
regulation and cardiopulmo-		major agreement expirations and	
nary function-----	11495	reopenings in 1963-----	3037
local application effect in cases of		major union contracts, United	
inflammatory hyperemia, USSR		States, 1961-----	5449
study-----	986	make more efficient instrument for	
post cold behavior of riboflavin de-		achieving economic growth and	
ficient rats-----	1760	full employment (excerpts	
Salmonella infection in mice, viru-		from remarks)-----	12773
lence as factor-----	18467	manpower utilization, job security	
thermal and metabolic responses of		problems and role of govern-	
Peruvian Indians native to		ment (address)-----	5426
high altitude-----	18478	pension plans, spring 1961, digest,	
Cold (disease):		errata-----	10894
common cold, transmittal, treat-		resources and procedures for en-	
ment, etc-----	3284	hancing effectiveness of labor	
<i>see also</i> Catarrh.		relations (address)-----	3010
Cold Bay, Alaska:		scope (address)-----	9231
airport, Federal aviation regula-		small business and pattern bar-	
tions-----	2251	gaining-----	1450
airport, weather, observations,		small business and union-wide bar-	
hourly, decennial census-----	7510	gaining-----	1470
Cold pressor test, 20-year follow up			
study of 123 subjects-----	4421		

# JANUARY-DECEMBER

	Entry
Collective farming, Tung-Kuo Brigade of Ling-ch'eng commune, translation	672
see also Collectives.	
Collectives:	
basic capital of kolkhozes, USSR study	8454
evaluation of labor consumption of kolkhoz workers in cost of output, USSR study	924
farms, material incentives, USSR study	2723
Soviet novelist describes kolkhoz life	10488
USSR state and collective farms, material incentives system	2468
working capital of kolkhozes, USSR study	19603
College Magnetic Observatory, magnetograms and hourly values	7796
College students, see Students.	
Colleges and universities:	
AEC's program for interdependence of national laboratories and universities (remarks)	13251
aids for Indian young people	5045
biology, study guide	4792, 13831
bond sales for higher education, 1962	13842
buildings, assignable area, by facilities category, etc	13841
Communist China, higher technological specialization	8185
cooperative education program with Army Dept.	18548
correspondence or directed home study courses, information	2149
degrees conferred—	
1960-61, summary	6347
1961-62, summary	10080
directory, higher education—	
1961-62	373
1962-63	12056
earned degrees conferred, 1961-62	15426
education for scientific revolution (remarks)	5951
educational grants for mineral research, hearing	20611
engineering—	
enrollments and degrees	6320, 6333
scientists and engineers employed, 1961	21044
technology programs, ECPD accredited, 1962	13870
enrollment—	
advanced degrees, fall 1960	12063
fall 1962, institutional data	379
expenditures and manpower for scientific research and development	9251
facilities—	
construction and rehabilitation on campuses, 1959-61	17382
higher education facilities act, reports	11798, 15280, 19021, 20474, 20492
motion picture production, survey report	12068
non-residential buildings, gross area by facilities category	12064
faculty—	
and other professional staff, 1st term, 1959-60	17373
status and career orientation, 1962-63, survey	2171
students and degrees, statistics, 1957-58	2144
Federal aid, digest of laws	9929
Federal Government should guarantee opportunity to all qualified high school graduates, 1963-64 national college debate topic	20456
print as House document, reports	17128, 17291

	Entry
Colleges and universities—Continued	
finance series	308, 13842, 13855, 13862
financial statistics, 1961-62, preliminary report	15437
5-year programs, teacher preparation	13868
flexibility in undergraduate curriculum	6336
food services provided to students, 1961-62	13855
freshman mathematics, entering levels and courses	17371, 10071
graduate fellowship program	13044
graduate schools of social work, field instruction, guides	10448
graduates 1958, work and study patterns, 1960 survey report	369
granting degrees in home economics, 1961-62, list	13645
grants—	
educational research, hearings	13645
institutes for advanced study for elementary and secondary teachers, etc., hearings	13645
training teachers of exceptional children, report	13579
higher education (periodical)	3767
home economics theses, titles	5838
honors programs for superior undergraduate mathematics students	19102
housing program, information	6057
Hungary—	
electrical engineering, achievements	6913
recent statutes governing higher education	6702
report of interview	6716
research, evaluation, organization and planning at technical universities, problems	991
importance of college education to nation and individual (address)	11682
instructional staff, projections, 1970-71	15432
International Teacher Development Program, report, 1961-62	20637
key educational media, personnel, directory	17379, 10073
liberal arts in revolutionary world	18607
liberal arts, language of free men (remarks)	4816
libraries, analytical statistics, 1959-60	12066
library statistics, 1961-62	19110
mathematics, advanced standing programs	5535
NASA and universities on science and technology of space explorations (addresses)	10074
national defense education act—	
graduate fellows, addresses, and fields of study, list	3954
NDEA and higher education (periodical)	19106
student loan program, distribution of Federal funds, 1959-64	17381
national defense student loan program participating institutions, list	6336, 8179, 17383
new dimensions in higher education	3192
NSF institutional grants program for science, 1963	11133, 14616
NSF undergraduate instructional scientific equipment program grants, 1962-63	1926
offering 2 and 4 year degree programs in policing, list	7805
opportunities for research in industrial development (address)	18740
origins of land-grant colleges and State universities	



# INDEX 1963

Entry	Entry
Colleges and universities—Continued	
physical facilities series— 13841, 17392	
physics 2, USAFI study guide— 17342	
Poland, organization and administration of higher education— 8189	
preparation in personnel work, programs, etc., 1963-64— 13854	
public higher education and national good— 9699	
publications, list— 20085	
ratio of equipment investment to building investment— 17392	
research grants, Air Force program, development— 14915	
role of Public Employment Service (remarks)— 17405	
Rumania, recent statutes governing higher education— 7127	
sabbatical leave, origin, etc.— 4821	
salaries and fees, 1962-63— 13862	
science and engineering professional manpower resources, 1961— 3194	
science, graduate enrollment, etc., in selected fields at leading schools, 1960-62— 19069	
selective service qualification test, bulletin of information— 3319	
staffing and physical facilities, 10-year objectives, 1960-61 through 1969-70— 6350	
standards of quality, study report— 17383	
State land-grant, Extension Service review (periodical)— 3634	
State legislation, survey, 1962— 2167, 17396	
student charges, 1962-63— 19101	
students enrolled for advanced degrees, fall 1961, summary report on survey— 4827	
summer institutes for science, mathematics and engineering teachers— 1363	
talent and tomorrow's teachers, honors approach— 8179	
teachers, amend national defense education act to permit partial cancellation of student loans, report— 20585	
two-year college series— 13870	
two-year, public, State formulas for support— 386	
university and education program for aging (address)— 617	
USSR—	
catalog— 7132	
higher educational institutions, news—	
instrument building— 8988, 10369, 10522, 10644, 12276, 15855, 17956	
radio engineering— 745, 6671, 10753, 12490, 14345, 20796	
radiophysics— 2725, 10524, 12406, 19628	
Institutions approved for post-graduate training, list— 8937	
Institutions of higher learning, awards— 15740	
see also Junior colleges—Land-grant colleges.	
Collette, Bruce B., preliminary field guide to mackerel- and tuna-like fishes of Indian Ocean— 16430	
Collier, Charles R., sediment characteristics of small streams in southern Wisconsin— 8355	
Collier, Ellen C., expropriation of American-owned property in 20th century, report— 18935	
Collier Creek:	
flood control, engineer report— departmental edition— 8197	
document edition— 7860	
Collins, Dennis, F., jr., launch vehicle with limited thrust vectoring control in presence of winds— 16409	
Collins, G. D., comparative study of PuC-UC and PuO <sub>2</sub> -UO <sub>2</sub> as fast reactor fuel— 14975	
Collins, George J., school shelter guide— 4608	
Collins, John J., jr., air embolism precipitated by decompression— 9104	
Collins, Joseph W., jr., employment trends and manpower requirements in Government— 14438	
Collins, Ralph T., remarks, Mar. 14, 1963— 9042	
Collins, William E.:	
manipulation of arousal and its effects on human vestibular nystagmus induced by caloric irrigation and angular accelerations— 1849	
secondary and inverted primary nystagmus from cat by caloric irrigation— 16865	
Collisions, see Aircraft accidents—	
Marine accidents—Motor vehicle accidents.	
Colombia:	
agricultural products, agreement— 20175	
atomic energy, cooperation for civil uses, agreement— 14714	
aviation transport services, agreement— 14720	
civic action, translations— 1066	
Commission for Educational Exchange, agreement— 7443	
Communist and pro-Communist activity— 827, 2582, 2710, 2818	
economic, technical, and related assistance, agreement— 1518	
establishing business— 17555	
investment guarantees, agreement— 3358	
labor law and practice— 9043	
peso devaluation in connection with border smuggling, Ecuadorian comments— 1005	
study mission report— 9863	
youth activity, Communist press comments— 2887	
Colombo, Annunziata, relief— 18825	
Colombo, LAC 79, lunar chart— 11508	
Colonial National Historical Park:	
Colonial Parkway, general information— 1346	
Yorktown Battlefield, general information— 16443	
Color:	
coordinated identifications for industry— 1332	
discrimination, psychophysical methods and sensitivity as function of determining spectral wavelength— 9105	
notation systems, handbook— 9314	
use to stimulate sales— 1490	
Color blindness, spectral sensitivity of retina receptors in experiments with dichromates, USSR study— 2858	
Color filters, see Light filters.	
Color of man, occupation by earnings and education, by color— 15084	
Colorado:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics— 4571	
aspen, decay associated with Fomes ignarius sporophores— 17490	
census of population, 1960, characteristics— 11607	
climatological data— 3517	
Costilla Creek compact, amendment, report— 18864	

# JANUARY-DECEMBER

	Entry
Colorado—Continued	
county business patterns, activities covered by OASDI program—	15054, 18677
electric rate book—	19195
Engelmann spruce lumber grade recovery—	12190
Glenwood Springs quadrangle and vicinity, geology—	17524
Green River oil shale, physical structure—	7220
Kansas River flood control, engineer report—	
departmental edition—	423
document edition—	317
La Sal Mountains area, regional geophysical investigations—	2346
mineral industry, minerals yearbook chapter—	3061
mountain-meadow cattle ranches, forage programs and cattle systems—	8147
northeastern, irrigation enterprises, organization, etc—	15416
precipitation data, hourly—	3771
rare-earth-metal and thorium resources, technological and economic problems—	3055
redevelopment area 5B, statistical profile—	13356-357
snow report—	11288
water supply outlook, early season snow report—	3336
west central, pulp and papermaking opportunities—	4992
ZIP code directory—	20030
Colorado-Big Thompson project, story—	5709
Colorado National Monument, general information—	11117
Colorado Plateau:—	
clay minerals in—	
Morrison formation—	600
Triassic rocks of Colorado Plateau—	19296
uranium deposits, distribution of elements, preliminary report—	15605
Colorado River and Valley:—	
bedrock and structural features of area between Lake Mead and Davis Dam—	15610
drought effects in basin—	20733
lower basin—	
storage project, etc., States water rights, adjustment of claims—	11920
water resources development, future plans—	8000
reclamation projects on lower river, general information—	14682
storage projects—	
Crystal Dam, etc., segment of Curecanti unit, economic justification—	11751
San Juan-Chama unit, make water available for pool for recreation at Cochiti Reservoir, report—	11997
upper basin storage project, etc., report, 1962—	8020
print as Senate document—	8046
water supply outlook and snow surveys of drainage basins—	4284-85
watershed conditions affecting water supply—	3825
Colorado River Commission of Nevada, <i>see</i> Nevada.	
Colorado River Indian Tribes, <i>see</i> Colorado River Reservation.	
Colorado River Reservation, fixing beneficial ownership, report—	20581
Colorado Springs, Colo., Peterson Field, weather observations, hourly, summary, decennial census of climate—	21155

	Entry
Colors, <i>see</i> Color.	
Colquitt County, Ga., truck crop production practices—	2127
Columbia, S.C., Columbia Airport, weather observations, hourly, summary, decennial census of climate—	14794
Columbia Drainage and Levee District:—	
engineer report—	
departmental edition—	2192
document edition—	1987
Columbia Plateau, western Idaho, Columbia River basalt, characteristics—	2342
Columbia River and Valley:—	
and tributaries, engineer reports—	
departmental edition—	4845, 6363-64, 8193-94
document edition—	4672, 6067-68, 7832-33
base flows at selected gaging stations in basin, Nov. 1, 1962—	2338
below Vancouver, Wash., engineer report—	
departmental edition—	2191
document edition—	1978
fish passage report—	
Bonneville, The Dalles and McNary Dams, 1961—	396
Rock Island Dam, 1961—	6464
flood season flow near The Dalles—	4212
monthly mean discharge at gaging stations and change of storage in lakes, etc—	4212
precipitation and temperature, monthly—	3918
storage in major power reservoirs, monthly report—	4212
water supply outlook and snow surveys for basin—	4286-87, 9392
Columbia River Power System, and related activities, audit by GAO—	588
Columbium, <i>see</i> Niobium.	
Columbus, Ind., population, special census—	11634
Columbus, Ohio:—	
occupational wage survey—	
departmental edition—	7167
document edition—	6078
Port Columbus Airport, weather observations, hourly, decennial census—	11396
Columbus Bend project, Interior Dept. project, hearings—	2052
Columns:—	
behavior of beam-columns in elastic range—	9637
steel spirals for concrete reinforcement, standard of trade—	18632
Colville River, and Anaktuvuk River confluence, simulated survival trek to Arctic Coast—	11504
Colwell, Robert C., address, May 16, 1963—	10306
Colwick, Rex F., preserving quality of mechanically harvested cotton, etc—	11455
Comandra blister rust, in central Rocky Mountains, reports of outbreaks—	6515
Combat areas, signal operations, theater of operations, field manual—	9651
Combat vehicles, <i>see</i> Motor vehicles.	
Combined case instructions, cases 1-50—	14627
Combined lineal list of officers on active duty in Marine Corps—	9093
Combines (harvesters-threshers), <i>see</i> Harvesting machinery.	

# INDEX 1963

Entry	Entry
Combustion:	Commerce—Continued
products, of sulfur-containing fuel	export expansion program, improv-
distillates, influence on con-	ing and expanding facilities,
struction materials of gas tur-	etc. (remarks)..... 19190
bines..... 18512	export of zipper chain from Japan,
rockets, 200-pound-thrust JP-4—	understandings, agreement..... 21126
nitric acid, low-temperature	export trade and small manufac-
chemical starting using 3-fluid	turer..... 1480
propellant value..... 5517	foreign agricultural trade—
solid propellants, effect of compo-	calendar year 1962..... 12054
sition during rapid pressure	digest..... 3717
decrease..... 1314	fiscal year 1961-62..... 2138, 10057
tests, oxygen-hydrogen-helium mix-	monthly..... 357, 3716
tures at loading pressures up	statistical report..... 3718
to 8,000 pounds per square	with European Economic Com-
inch..... 19918	munity..... 2142
turbojet annular combustors, per-	foreign commerce of U.S., quarterly
formance at high-altitude su-	summary..... 4131
personic flight..... 14530	foreign trade—
underground oil-recovery experi-	and role of freight forwarder
ment in Venango First sand,	(remarks)..... 10156
Warren County, Pa..... 19875	code of Federal regulations..... 12116
Combustion gases, <i>see</i> Gases.	East European, translations..... 692,
Combustors:	889, 1019, 1026, 2609, 2630, 2653,
annular turbojet—	2784, 2914, 5131, 5133, 5229, 5293,
combustion performance at high-	5330, 5337, 5410, 6733, 6786, 6818,
altitude supersonic flight..... 14530	6875, 6964, 7018, 7124, 8467, 8568,
effect of fuel injectors and liner	8592, 8619, 8724, 8756, 8790, 8820,
design on performance with vapor	8912, 8998, 10475, 10558, 10581,
fuel..... 14529	10601, 10666, 10827, 12279, 12346,
fuel rich hydrogen combustion sys-	12469, 12477, 12543, 12602, 12639,
tem, performance..... 10977	12660, 12753, 14229, 14312, 14361,
ram-jet, can-type flame holder, alti-	14390, 15717, 15907, 16030, 16147,
tude investigation..... 5512	16199, 17708, 17848, 19431, 19495,
rocket, effect of gas flow transients	19577, 19636, 19644, 19679, 19764,
on heat release on burning	20852.
liquid drops..... 9153	expansion goals (remarks)..... 9786
short turbojet, performance with	expansion problems (remarks)..... 10155
hydrogen fuel in quarter-an-	exporting, how-to-get started
nulus duct, etc..... 10976	handbook..... 632, 6624
single fuel-vaporizing, with inject-	FT reports..... 3727-37
ors adapted for gaseous hydro-	opportunities for U.S. business
gen, performance..... 10975	in world markets (remarks)..... 4654
Comella, Lawrence J.:	prospects in oilseeds and oilseed
food regulations of Bolivia..... 2430	products..... 6480
industrial development law of Ecu-	prospects in wheat, rice, feed
ador..... 5064	grains, etc..... 10208
living conditions in Ecuador..... 6602	summary reports, monthly..... 4258-67
Comets:	United States..... 2397, 5090,
distant, characteristics..... 7283	6615, 10343, 15652, 17558, 19357
interplanetary plasma, observa-	United States, readjusting, imple-
tions, experiments, etc..... 19919	menting Trade expansion act
Commander's guide for career coun-	(excerpts from address)..... 16568
selling..... 11541	foreign trade regulations—
Commemorative coins, <i>see</i> Coins.	El Salvador..... 15650
Commemorative medals, <i>see</i> Medals.	India..... 20757
Commerce:	Morocco..... 15651
Africa sales frontier for U.S. busi-	Panama..... 20756
ness..... 8375	improving commercial relations
agricultural products, protection by	with Philippines (remarks)..... 9785
nontariff trade barriers..... 17357	international agricultural trade,
agricultural trade development and	terms used..... 20692
assistance act of 1954, Library	international, Belgium, market for
of Congress project newsletter..... 3866	U.S. products..... 10327
Argentina, declaration on provi-	international commerce, weekly..... 3797
sional accession to GATT..... 1552	supplements..... 17563-565
Communist China—	international meetings, world list..... 4315
finance..... 14100	international outlook, prospects
trade..... 652	for American business abroad
913, 1033, 2577, 2621, 2641, 2837,	(address)..... 19353
2886, 5375, 6740, 6869, 6937, 6984,	international trade and economic
7092, 8455, 8532, 8599, 8844, 8984,	development (address)..... 15122
10439, 10529, 12699, 14182, 14241,	international trade expansion (ad-
14367, 14378, 15754, 16015, 16090,	dress)..... 202
16189, 17685, 17754, 17816, 17903,	interstate—
19374, 19462, 19488, 19666, 19702,	publications, price list..... 14655
19738, 20799, 20877.	State taxation of activities, in-
domestic oceanborne and Great	vestigation—
Lakes, 1961, summary, 1952-	expenses, reports..... 6120, 18877
61..... 12817	extend time for filing reports—
expanding our export trade (re-	law..... 13416
marks)..... 7809	reports..... 11807, 11987
	interstate commerce act—
	amend, hearings..... 17306
	annotated, advance bulletins..... 17568

# JANUARY-DECEMBER

	Entry
Commerce—Continued	
Japan-Korea trade in 1st half of 1962, economic report	10452
lumber shipments to Puerto Rico, Secretary of Commerce to suspend for 2 years requirement for exclusive use of U.S. vessels, report	20573
maritime resources for security and trade	15123
one world, one market (address)	6585
Pacific trade patterns, hearings	329, 19048
publications, price list	5682
small business, opportunities in foreign trade—	
hearings	20506
report	2042
Socialist domestic trade, formula for management, Polish study, statistics, country designation, code classification	16163
sugar and international trade (address)	11641
total export and import trade of U.S.	1727
trade agreement with—	2386
Japan	2035
Paraguay	21124
Switzerland	18335
United Arab Republic	11326
United Kingdom	2035
trade expansion—	
challenge and Pensacola, Fla. (address)	5091
challenge of merchant marine (remarks)	10157
importance to U.S. (address)	6046
program and port growth (address)	204
trade expansion act of 1962—	
assistance for workers laid off as result	3013
digest of testimony	2066
implementing (address)	4650
role in opening foreign markets (address)	18759
summary	5724
trade, interim agreement with Spain	11305
trade mission to—	
Belgium	17563
France	15653
Mexico	12258
Netherlands 1963, final report	14069
Norway & Denmark	17564
Sweden	17565
trade missions, centers, and fairs as new marketing devices (address)	14070
trade, supplementary concessions to GATT, agreement with Japan and New Zealand	18337
transportation's importance (remarks)	13352
United States aid and freer trade in Latin America, Bolivian comments	1067
United States merchant marine role in world trade (remarks)	10159
United States trade with—	
Japan, 1959-61	2400
major world areas	5089, 10344, 19358
Near East, statistical report, 1959-61	2435
Puerto Rico and U.S. possessions, monthly report	3737
Sino-Soviet bloc, 1961-62	17559
waterborne—	
calendar year, 1961	465, 4873, 8198
calendar year, 1962	19148-150
foreign, 1961	13309
foreign, Great Lakes area, 1961	15087
national summaries	465, 4783, 8198

	Entry
Commerce—Continued	
world trade—	
and U.S. agriculture (remarks)	7586
fishery industries, aspects of interest	547
world trade information service—	
economic reports	2418-26
operations reports	2427-34
statistical reports	2435
see also Exports—Tariff—Trade routes—also names of countries and places—also names or classes of articles of commerce—also certain headings beginning Commercial.	
Commerce Committee for Alliance for Progress, report	9783
Commerce Committee, Senate:	
calendar	3851
committee print	2088
hearings	328-329, 2086-87, 2089-90, 4773, 6291, 8096-8101, 10004-7, 12009-13, 13796-799, 15378-382, 17304-306, 19046-49
investigations and studies, authorization, report	6279
reports	8047, 8050
11964-967, 11974-975, 11977, 11982, 13699, 13749, 13753-754, 13756, 17246, 17257, 17271-276, 17279, 17284, 17295, 19007-8, 19013-14, 19025, 19031, 20573.	
Commerce Department:	
activities in promoting opportunities for Negroes in business (address)	18748
appropriations, 1964—	
hearings	11875
report	11848
Assistant Secretary, nomination of Richard H. Holton, hearings	8096
checklist of services for you	6048
cooperative offices, business information and assistance available	7807
efficiency and economy in operation, report	13578
field offices, low cost marketing aids for higher export profits, services available	19354
international affairs, press releases	4063
Maritime Evaluation Committee, final report	15123
press releases	4045
programs relating to transportation problems (address)	9773
publications, 1962 supplement	18760
selling around world, how Commerce helps	7810
sundry nominations, hearings	2090
transportation research activities (remarks)	20392
Under Secretary, nomination of Franklin D. Roosevelt, jr., hearings	8096
Commercial banks, see Banks and banking.	
Commercial fisheries, see Fish and fisheries.	
Commercial Fisheries Bureau:	
Biological Laboratory, report, 1961	13954
program, conservation has gone to sea	4951
report, 1959	2296
report, 1960	556
report, 1961	20687
research and development in Great Lakes and Central region, long-range program	13953
research, development, and services, long range report	19225
transportation research and service activities, 1961, report	10194

# INDEX 1963

	Entry		Entry
Commercial law, uniform commercial code for D.C., enact, report	7977	Commercial treaties—Continued	
Commercial policy series	5724, 11294, 16568	friendship, establishment and navigation, agreement, with Luxembourg	11323
Commercial practices, code of Federal regulations	6423	implementing Trade expansion act, readjusting U.S. foreign trade (excerpts from address)	16568
Commercial production of tomatoes	4349	reciprocal trade agreement act of 1934, with amendments, compilation	211
Commercial products:		reciprocal trade agreement with Switzerland, modification	11302
balance sheet of production and distribution between departments, Communist China study	850	reciprocal trade agreements program, digest of testimony	2066
boiler shop products industry, outlook for 1963 and review of 1962	4518	trade agreement with—	
durable goods manufacturing, employment and hours, trends	14482	Argentina	18336
employee earnings in retail general merchandise stores—		Paraguay	1561, 13082
departmental edition	3026	trade agreements program—	
document edition	2010	operations, July 1959–June 1960	7468
exports—		operations, reports	4718, 20458
airborne, foreign trade reports	3735–36	trade expansion act of 1962—	
foreign trade reports	3732–34	negotiations, articles to be considered, etc.	21117
growing market for U.S. products in India	5088	Tariff Commission reports—	
hot goods, written assurances of compliance under Fair labor standards act, general statement	16649	clinical thermometers	11342
identified merchandise, equalize rights in distribution, hearings	328	household china tableware and kitchenware	9461
import duties	11641	iron-ore mine workers	14741
imports—		softwood lumber	5752
airborne, foreign trade reports	3730–31	whisky, except Irish, Scotch, etc.	11347
foreign trade reports	3727–28	treaty with—	
free and dutiable goods and average rates of duty, 1961	2399	Muscat and Oman, text, report	20527
statistical classification—		Pakistan—	
schedule A, changes	7748	report	20546
schedule A, commodity numbers, revisions, 1962	9729	text, protocol, etc.	20520
schedule T, changes	7749, 9713	what trade expansion act means to U.S. industry (address)	18746
Kuwait market	8377	see also General agreement on tariffs and trade.	
market for U.S. products in—		Commissaries:	
Belgium	10327, 17563	stores, grocery department operations, technical manual	16829
Sweden	17565	supplies authorized for issue and sale, Army and Air Force regulations	20325
Vietnam	2419	Commissionarymen, 3 & 2, Navy training courses	11144
new products—		Commission for Educational Exchange between United States and Afghanistan, agreement	20189
and processes, recent technical reports from Federal agencies	14933	Commission for Educational Exchange between United States and Colombia, agreement	7443
finding for small manufacturers	1463	Commission for Educational Exchange between United States and Malaya, agreement	9436
planning state and cooperative commercial commodity fund of Mongolian People's Republic	2807	Commissioned Officer Corps, C&GS scientific careers	20389
products list circular	4111	Commissioned officers, see Army Reserve—Coast Guard—Coast Guard Reserve—Public Health Service.	
purchases by AEC, list	13252	Commissioners:	
sell U.S. goods in Norway & Denmark	17564	Court of Claims, increase, report	9968
selling consumer products in France	15653	Federal Mediation and Conciliation Service, employment opportunities	12113
USSR consumer goods and domestic trade, translations	834, 873, 910, 978, 5258, 6787, 6819, 8449, 8693, 10374, 10386, 10400, 12384, 15872, 16159, 17574, 17612, 19385, 19673.	Commissions, see names of commissions.	
worktime required to buy articles	7179	Commissions on Organization of Executive Branch of the Government, see Organization of Executive Branch of the Government Commissions.	
see also names of products.		Committee on Tidal Hydraulics:	
Commercial standards, see Standards and standardization.		research activities sponsored to develop solutions to tidal hydraulic problems	13877
Commercial treaties:		technical bulletin	13877
Cuban trade and payments agreement with Mali	2864		
establishment, convention with France—			
report	20546		
text, protocol, and joint declaration	20521		



	Entry
Committees, <i>see</i> Congressional committees—also names of committees.	
Commodities, <i>see</i> Agricultural products—Commercial products—Exports—Imports.	
Commodity Credit Corporation: appropriations, 1963, supplemental, Agriculture Dept., hearings—	6183
audit report, 1961—	11749
cotton export financing—	15542
financial condition and operations—	4138
operations, June 30, 1962, graphic summary chart—	11700
report, 1962—	4656
revised comparative financial data, 1953-61—	1961
sale of feed for maintenance of foundation herds, penalties for misuse, report—	13721
sales list, monthly—	3502
statutes, compilation—	1683
warehousing operations under 1959 and 1960 cotton purchase programs, GAO review—	5010
Commodity Exchange Authority, appropriations, 1964, Agriculture Dept., hearings—	9921
Commodity exchanges: act as amended—	18761
code of Federal regulations—	6424
commodity futures statistics, July 1961-June 1962—	1726
Irish potato futures trading, prohibit—	
hearings—	9920, 20604
report—	18846
Common carriers, <i>see</i> Carriers.	
Common Market, <i>see</i> European Economic Community.	
Common names of fish, USSR—	10700
Commonwealth Parliamentary Association: conference, Lagos, Nigeria, Nov. 9-10, 1962, report of U.S. delegation—	8105
Senate to send observers to meeting, reports—	13758, 13769
Communes:	
Communist China—	
agricultural technical reform and consolidation—	10410
economic plans and geography—	6864
incentive to change system—	2133
Communicable Disease Center, training guide, insect control series—	14668, 20109
Communicable diseases, <i>see</i> Contagion and contagious diseases.	
Communications:	
act of 1934—	
amend—	
hearings—	17307, 19049
reports—	19007-8, 19025
amendments—	2254
suspend equal time requirement—	
hearing—	9940
reports—	11820, 11843
channels—	10062
Coast Guard manual—	11681
code-names, selection—	1770
common carriers, miscellaneous rules, FCC rules and regulations—	10121
communications-electronics officer, theater of operations, field manual—	9651
Communist China—	
rapid development—	2975

	Entry
Communications—Continued	
Communist China—Continued	
translations—	652, 913, 1033,
2577, 2621, 2641, 2837, 2886,	
5375, 6740, 6869, 6937, 6984,	
7092, 8455, 8532, 8599, 8844,	
8984, 10439, 10529, 12699,	
14182, 14241, 14367, 14378,	
15754, 16015, 16090, 16189,	
17685, 17754, 17816, 17903,	
19374, 19462, 19488, 19660,	
19702, 19738, 20789, 20877.	
concurrent repetition of word flow,	
intelligibility factors and	
scores—	9099
contractions used by FAA in air	
traffic control, etc., handbook—	9641
direct link, memorandum of understanding with USSR—	14734
equipment—	
current industrial reports—	3575, 16892
Federal item identification guides for supply cataloging, supplements—	3656
manufacturing industry, outlook for 1963 and review of 1962—	4539
microminiaturization—	1768
facilities, agreement with Belgium—	13090
facilities at long range proving ground, continued operation, agreement with Dominican Republic—	1534
industry wage survey—	
departmental edition—	1171
document edition—	276
Journal of research, National Bureau of Standards—	3818
Naval station, agreement with Australia—	16599
Nimbus spacecraft system—	5571
procedures, ATS manual, change—	1781,
11520, 13222, 14926, 18525	
publications, price list—	16491
satellite act of 1962—	
activities, reports—	4722, 18883
incorporators of Communications Satellite Corporation, nominate, hearings—	8088, 8100
satellites—	
address—	18115
commercial system (paper)—	10116
FCC rules and regulations—	4887, 8224
intercontinental testing, agreement with—	
Italy—	3359
Japan—	3360
military, program, hearing—	11904
passive, with Lambertian surfaces—	18144
peaceful use for free exchange of ideas (address)—	486
Project Relay, 1st space satellite experiment designed to link 3 continents—	5536
supplement—	5537
Project Syncom, global network, technical progress report, hearings—	8097
science, technology, and development, papers prepared for United Nations conference—	634
space communications, organization, networks, etc.—	5611
space satellite system—	
experiments, report—	286
ownership and control, hearings, print additional copies, reports—	8079, 11864
statistics, common carriers, 1961—	8225
technician 0 3 & 2—	3210

# INDEX 1963

	Entry		Entry	
Communications—Continued		Communism—Continued		
Ulan Bator City, Mongolia, brief instructions on using of communications and telephone directory	14211	Communist Party plenum, Chilean Christian Democrat's comments	714	
USSR, long distance	6728	Communist Party's cold war against congressional investigation of subversion, report	307	
USSR, translations	691, 1084, 5331, 6700, 6708, 7110, 8463, 8578, 8690, 9009, 10746, 10855, 12443, 12673, 12713, 14173, 16239, 17794, 17951, 19547, 19658, 19660.	construction of Communism and social sciences, USSR	3005	
VHF link systems, FAA handbook	15471	Cuba as base for subversion in America, study	6302	
see also Electric lines—Military communications—Radio communications—Telegraph—Telephone.		Cuban embassies to aid in infiltrating spies among workers—energy of atom serves communism, USSR study	720 696	
Communications Satellite Corporation:		facts—		
activities, memorandum	4722	ideology, print additional copies, report	11859, 13766	
incorporators, nominate, hearings	8088, 8100	Soviet Union, print additional copies, reports	11859, 13766	
opinion of Attorney General	18013	Ghana, is U.S. money aiding another Communist state, hearing	13816	
report, 1st year	18883	Hungary, communist in workers' paradise, consultation with John Santo	8013	
Communism:		international developments, translations	660, 682, 703, 707, 715, 725, 760, 762, 775, 791-792, 807, 813, 821, 823, 833, 856, 896, 905, 930, 952, 956, 958, 971, 1004, 1035, 1049, 1057, 1060, 1095, 1116, 1128-29, 2485, 2491, 2506, 2558, 2568, 2586, 2614, 2657, 2683, 2689, 2691, 2705, 2741-42, 2744, 2747, 2762, 2821, 2831, 2834, 2856, 2889, 2912, 2930, 2952, 2982, 5139, 5181, 5187, 5245, 5250, 5257, 5282-83, 5292, 5320, 5341, 5356, 5400, 5418, 6646, 6656, 6681, 6685, 6691, 6707, 6722, 6756, 6817, 6851-52, 6861, 6901, 6921, 6931, 6953, 6961, 6963, 6972-73, 7001, 7032, 7062, 7064, 7077, 7115, 8445, 8487, 8494, 8502, 8560, 8569, 8614, 8626, 8663, 8699, 8741, 8758, 8782, 8785-86, 8811, 8945, 8959, 8969, 8981, 8989, 9007, 9011, 9014, 10392, 10445, 10458, 10469, 10568, 10579, 10593, 10612, 10669, 10697, 10742, 10757, 10810-811, 10837, 10877, 12290-292, 12336, 12339, 12357, 12413, 12458, 12475, 12550, 12557, 12600, 12622, 12628, 12629, 12678, 12691, 12717, 12756, 12769, 14116, 14149, 14179, 14204, 14223, 14231, 14244, 14246, 14297, 14344, 14366, 14374, 14379, 14407, 15678, 15742, 15770, 15783, 15794, 15828, 15864, 15963, 15981, 15998, 16021, 16052, 16087, 16111, 16119, 16182, 16191, 16235, 16240, 16260, 17600-601, 17647, 17665-666, 17686, 17699, 17703, 17731, 17769, 17779, 17785, 17790, 17826, 17872, 17920, 17957, 17970, 17987, 19379, 19396, 19417, 19433, 19469, 19494, 19505, 19531, 19555, 19581, 19627, 19662, 19688, 19713, 19735, 19754, 20762, 20802, 20872, 20884, 20893.	
activities in peace movement, hearings	9950	periodicals used in preparation, list	12624	
basic economy, price an important weapon, USSR translation	16105	international movement—		
Berlin, Communist pressures, USIA in action	11365	and peaceful coexistence, French Communist evaluation	5283	
Brazil, political activity	2817	defeat of dogmatism needed to unify	6906	
building, social sciences development problems, USSR study	6955	reinforce solidarity and unity	10757	
Caribbean threat to U.S., hearings, print additional copies, report	9985			
Castro-Communist subversion in Western Hemisphere—				
hearings	6194			
reports	6195, 7956			
Castro regime in Cuba	11293			
Castro's network in United States, Fair Play for Cuba Committee, hearings	10019, 12022, 15393, 19062			
print additional copies, report	17289			
Chile, Pablo Neruda replies to pastoral letter of bishops	6637A			
Chinese Communist terms, standard translations, JPRS handbook	19689			
Colombia—				
Communist and pro-Communist activity, translation	827, 2582, 2710, 2818			
youth activity, Communist press comments	2887			
communism and history of resistance to Nazism, etc., Belgium study	15880			
communism and Trotskyist activity within Greater Los Angeles Chapter of Fair Play for Cuba Committee, report and testimony, additional copies, report	11857			
Communist attitude toward work, trends in development, USSR study	14323			
Communist China—				
class education in K'ang-Chiang Middle School	14250			
defector, testimony of Chao Fu, hearing	334			
Communist espionage patterns, report, additional copies, report	11855			
Communist ideology, man of the future is being trained today, USSR viewpoint	1000			
Communist parties in Near East	5425			

# JANUARY-DECEMBER

	Entry
Communism—Continued	
international movement—continued	
revolutionary platform, Czech	
editorial	809
West German press items	10378
Italian Communist views on Marx-	
ism	2946
Italian Youth Congress, Serri's re-	
port to	2752
Japan Socialism Reform Move-	
ment, Preparatory Council	
comments	1038
Japan, translations from Atarashii	
rosen	2800
labor and principle of self-interest	
in transition from socialism,	
USSR study	12765
Laos, Communist threat, U.S. pol-	
icy, etc.	11528
La Paz riots of Oct. 26, 1962	928
Latin America—	
Communist offensive in	7661
meeting Communist threat	7662
translations	8981
Leninist principles for cadre train-	
ing, USSR study	6650
management challenge of the six-	
ties (address)	4399
Marxist political economy and bour-	
geois political economy, Com-	
munist Chinese study	5213
Marxist sociology and sociological	
research, USSR study	8700
material and technical base, prog-	
ress, etc., USSR study	8624
Mongolia, progress under invincible	
banner of Leninism	14204
Mongolian People's Revolutionary	
Party, review of 40 years	
achievements	868
national democratic state—	
and its historic role	824
establishing, Bulgarian study	718
new man in Communist society	2868
Peruvian communists and military	
junta	2833
political propaganda, exclusion	
from U.S. mails, hearings	15327
Pravda attacks Italian Socialist	
leader Nenni for anti-Com-	
munist policy	876
pro-Castro forces, attempts to per-	
vert American press, testimony	
of Carlos Todd, hearing	4784
pro-Castro propaganda activities in	
U.S., hearings	17189
problems	4108
propaganda and truth about con-	
ditions in USSR, hearing, print	
additional copies, report	11858
property concept, shift from Social-	
ist, laying ideological ground-	
work, USSR study	16225
publications, official list	11218
science as weapon for building com-	
munism, USSR study	2709
scientific and technical progress,	
USSR study	12597
scientific, basic principles of course,	
USSR	2711
Sino-Soviet controversy, key is-	
sues	11529
Soviets charge Fourth Interna-	
tional and Communist Party	
of China with Trotskyism	19759
subversion in Western Hemisphere	
(statement)	7435
transition to world-communism,	
discussion by Soviet writer	661
United States—	
Soviet propaganda outlets in	
U.S., hearings	306
print additional copies, re-	
ports	11861, 13771
testimony of Alexander Orlov	333

	Entry
Communism—Continued	
USSR—	
agricultural development, state-	
ments of N. S. Khrush-	
chev	17838-842
conference on ideology	15670
de-Stalinization, new moves,	
West German analysis	1011
Izvestiya censures worker's eco-	
nomic manipulations	19632
Komsomol youth and foreign stu-	
dents, Soviet press reports ten-	
sion between	10807
Marxist-Leninist teaching on	
war, eliminate dogmatism and	
distortions	19698
role of scientific and engineer-	
ing personnel in raising labor	
productivity	19503
scientific and technical research	
and achievements, public in-	
spection of plan fulfillment	5281
scientific-atheist propaganda	17729
trade while building a Commu-	
nist society	861
translations from Kommunist	
1062, 2457, 2779, 6773, 8705,	
8980, 10625, 12344, 12595,	
14253, 15694, 16081, 17874,	
19467.	
Venezuelan University's School of	
Journalism exposed as Marx-	
ist indoctrination center by	
La Esfera newspaper	2695
vitality of revolutionary theories,	
Vietnamese editorial	8989
world strength of Communist Party	
organizations	7458
World Youth Festival, Helsinki,	
Communist activities—	
hearings	2065
print additional copies, report	11856
Communist bloc, see Soviet bloc.	
Communist China, see China.	
Communist guerrillas, threats against	
Venezuelan peasantry	2859
Communist International, youth and	
student apparatus	17317
Communist Party of Belgium:	
discussion forum, contributions	8786
preparations for 14th congress	
Easter 1963	6707, 6921
Communist Party of Bolivia:	
activities	2818
program	779
Communist Party of Bulgaria,	
speeches and resolutions of 8th	
congress	945
Communist Party of Chile:	
first national assembly of profes-	
sionals and technicians	757
letters exchanged with Socialist	
Party	2623
Communist Party of China:	
education	2980
French and Italian attacks pub-	
lished by Jen-min jih-pao	9014
polemic with Italian Communists,	
translations	19662
policy clash with Soviet Communist	
Party, German view	17970
Trotskyism charged by Soviet, Es-	
tonian study	19759
Communist Party of Denmark, 21st	
Congress, pre-Congress discus-	
sion, etc.	2518
Communist Party of East Germany	
economic system, result of cre-	
ative party work, translation	15758
Communist Party of France:	
attacks on Chinese Communist	
Party	9014
documents relating to Sino-Soviet	
controversy	6851

# INDEX 1963

Entry	Entry
Communist Party of Guatemala, con- demns Carlos Manuel-----	2866
Communist Party of Indonesia, Aidit's political report-----	12400
Communist Party of Israel, policy statements-----	794
Communist Party of Italy: attacks on Chinese Communist Party-----	9014
features articles from new bi- monthly review-----	8782
member expelled for doctrinaire and extremist views-----	2827
polemic with Chinese Communists, translations-----	19662
10th Congress, Panjetta's reply to Chinese-----	2742
Togliatti's report to 10th Congress--	1128
views on peace, etc-----	2946
Communist Party of Japan: crisis in structural reform theory and plots of anti-Party ele- ments-----	14189
fourth central committee plenum presidium report by Secretary General Miyamoto-----	2734
National Activist Conference, Sec- retary-General Miyamoto's con- cluding remarks-----	5152
Party literati who signed anti-Party statements-----	2912
resolution of the 4th Central Com- mittee plenum-----	682
Communist Party of Mongolia, func- tions and activities-----	12504
Communist Party of North Vietnam, protect party organization by good management of cadres and party members-----	10487
Communist Party of Norway, discus- sion of Soviet anti-semitism by Norwegian Communists-----	10880
Communist Party of Poland, decen- tralization, truth-----	15902
Communist Party of Soviet Union: accomplishments and goals (speech)-----	17803
Central Committee decisions, tasks of agricultural science-----	6683
November Plenum, resolutions for more effective construction-----	6835
speeches delivered at plenum-----	5267
Chilean Christian Democrat's com- ments on Communist Party plenum-----	714
decree further development of biol- ogy practice-----	19616
international worker and national liberation movement, problems in historical research-----	1130
leftist experts answer 8 questions on 22d congress-----	1097
Peiping reply to letter-----	15783
policy clash with Chinese Commu- nist Party, German view-----	17970
pre-election appeal to Leningrad voters (speech)-----	8880
program and education of younger generation, USSR study-----	5110
role in preventing expenditures for social and cultural measures-----	12425
22d Congress, resolutions, protec- tion of natural resources in light of-----	16049
Communist Party of Sweden, contro- versy within-----	14162
Communist Party of Tunisia, ban- ning of activities, Soviet reac- tion-----	6649
Communist Party of United States: assistance to foreign Communist governments, hearings-----	4759, 13672 11862, 13772
print additional copies, reports--	
cold war against congressional in- vestigation of subversion, re- port-----	307
Southern California District, united front technique-----	17188 15269
hearings-----	
report-----	
what it is, what it does, handbook for Americans, print additional copies, report-----	6283
Communist Party of Venezuela, anti- terrorist faction drafts mani- festo-----	2832
Communist youth activities-----	2065
Communist Youth Federation, Italian, see Italian Communist Youth Federation-----	
Communities, see Cities and towns-- Redevelopment (city planning, etc.)--also names of com- munities-----	
Community colleges, see Junior col- leges-----	
Community development programs: banks and community progress (re- marks)-----	6059
case studies-----	12261
community development review-----	15654
economic redevelopment in 8 north- eastern communities, case book studies-----	16817
Federal aids, handbook-----	14932
homes, etc., publications, price list--	3267
manual for leaders in community feeding programs-----	5093
medical self-help training-----	21089
SBA loans to help your community, prescription for progress-----	5717
West African stories-----	12261
Community effort in boll weevil con- trol-----	4338
Community facilities: Alaska, reduce minimum public land selection-----	18781 15283, 17266
law-----	
reports-----	
federally aided public housing pro- grams, planning for health, education and welfare serv- ices-----	19339
health, education, and welfare, goals for planning services-----	19333
recreation and public domain-----	17547
sewerage systems, minimum design standards-----	15489
Yards and Docks Bureau design manual, change-----	1606
Community Facilities Administration, news, releases-----	3531
Community health, see Health. Community health services, see Health-----	
Community Health Services Division, research grants program, focus-----	16496
Community life: Federal textbook on citizenship-----	19343
improving conditions for agricul- tural migrants-----	14447
recreation, PACAF basic bibliog- raphies-----	18491
Community medicine, American con- cept of comprehensive care-----	12986
Community Relations Service, estab- lish, hearings-----	17304-305
Community renewal program guide CRP (series)-----	14764
Community surveys, wages, 1948-- June 1962-----	1181

# JANUARY-DECEMBER

	Entry
Commutators, static, technical report	5871
Compact air transport (address)	20371
Compacts (interstate), <i>see</i> Interstate agreements.	
Companies:	
acceptable as sureties on Federal bonds, list	16635
filing annual reports with SEC, directory	9377
Comparators, RPM, unnecessary costs incurred by Navy Dept., in procurement, GAO report	14008
Compasses, <i>see</i> Gyrocompass.	
Compensation, <i>see</i> Employers' liability and workmen's compensation—Pensions—Railroads—Salaries.	
Competition:	
dual distribution and related vertical integration impact upon small business, hearings	15333
Government competition with private enterprise	13807
safeguarding (talk)	7538
Component feasibility test report for AMF on-power refueling system for Douglas Point Plant	120
Composite plans for raising labor productivity, USSR	6741
Composition (printing), <i>see</i> Typesetting.	
Compositors, <i>see</i> Printers.	
Compounds:	
effects of alkaline phosphate solutions at elevated temperatures on compounds prepared at room temperature	11185
superconductivity occurrence, rules, vaporization at high temperatures	18306
<i>see also</i> names or classes of compounds, or purpose for which used.	9638
Comprehensive export schedule	8376
Compressed air, corroded units performance of pneumatic systems, investigation, USSR study	5145
Compressibility, Burnett method of determinations, application to multiphase fluid mixtures	14524
Compressors:	
and related explosions	18075
axial flow, hub-tip radius ratio rotor designed for 40 pounds per second per square foot with design tip diffusion factor of 0.20, investigation	5559
centrifugal, for high-temperature helium, performance characteristics	16342
current industrial reports	13295
Federal item identification guides for supply cataloging, supplements	3655
Industry outlook for 1963 and review of 1962	4532
transonic cascade and test results for 4 blade sections	10999
Compton, Dale L., free flight measurements of drag and static stability for blunt-nosed 10° half-angle cone at Mach no. 15	5566
Comptroller General, <i>see</i> General Accounting Office.	
Comptroller of Currency:	
authority over trust powers of national banks by both SEC and Comptroller of Currency—	
hearing	13648
report	13553
report, 1961	205
departmental edition	225
document edition	

	Entry
Comptroller of Currency—Continued	
report, 1962—	
departmental edition	16966
document edition	17074
Computations, <i>see</i> Numerical calculations.	
Computers:	
bibliography	11598
decoding digit-to-angle converter with intermediate conversion, USSR study	20845
experiments with one-dimensional plasma models	18576
mathematics and computers, practical application, Rumanian study	17948
Soviet digital, use	712
<i>see also</i> Calculating devices—Electronic computers—Perceptron.	
Computing machine paper, <i>see</i> Calculating machine paper.	
Computing machines, <i>see</i> Calculating machines—Electronic computers.	
Computing ore reserves by triangular method using medium-size digital computer	7213
Comstock, Hazel B.:	
magnesium	12833
magnesium and magnesium compounds	19839
magnesium compounds	19844
magnesium in 1962, preliminary	3059
Concentration (metallurgy):	
fine mica	10956
rhenium volatilization in molybdenite concentrates, USSR study	14331
Concentration tables, coal washing equipment, performance characteristics	12836
Concerning some classes of finite automata, USSR study	839
Concessions, national park areas, deficiencies in contracts, GAO report	12199
Concrete:	
bibliography	1866
compacted weight as measure of workability, investigation, aggregate tests	19152
expansion prevention, influence of alkali content on fly ash effectiveness	13890
horizontal construction joints, methods of preparing	17414
mattresses, aluminum-coated wires as reinforcement	4875
porous, corrosion of reinforcement steel, USSR study	6701
precast, mine supports, progress report	10943
prestressed, rigid pavements for military airfields, small scale model studies	13880
properties, influence of fine aggregate grading on, laboratory investigation	466
reinforced porous ash items, protecting, USSR study	6910
reinforced stressed containers, construction assembly for petroleum products, USSR study	2865
<i>see also</i> names of manufactured articles.	
Condemnation of property, insanitary buildings in D.C., amend act, report	13782
<i>see also</i> Eminent domain.	
Condensed milk, <i>see</i> Milk.	
Condition of housing units by size of place	11370
revised table	18358



# INDEX 1963

	Entry		Entry
Conduct of life, duty, honor, country, character guidance discussion topics -----	7668, 18545	Conference committees, reports -----	9888, 9902-3, 9916, 11814, 13584, 13598, 13616, 15239, 15293, 17107, 17120, 17124, 18854-855, 18886, 18914, 20490, 20492
Conductivity (electric), <i>see</i> Electric conductivity.		Conference in matter of pollution of interstate waters of Andros-coggin River, proceedings -----	3276
Conduits, <i>see</i> Electric conduits.		Conference lines, <i>see</i> Shipping conferences.	
Cone, Clarence D., Jr.: bending-moment distribution of cambered-span wing systems -----	7248	Conference on Biology of Cutaneous Cancer, proceedings, Apr. 6-11, 1962 -----	7315
induced lift, etc., of nonplanar lifting systems -----	11090, 18168	Conferences, congresses, etc.: future international meetings, world list -----	4314-15
Cones: aerodynamic characteristics at Mach no. 6.77 of 9° configuration, etc., at angles of attack up to 180° -----	7265	international organization and conference series -----	3342, 5727, 7436, 9399, 11298, 13072, 14710-711, 18328
aerodynamic damping moments with different centers of rotation -----	7292A	2nd Vatican Ecumenical Council, viewed by Ukrainian Catholic of Eastern Church -----	17916, 20760
axisymmetric double-cone external-compression inlet in Mach number range 2.07 to 1.48, performance of Mach no. 3.0 design -----	18128	Slovak writers conference, Apr. 22, 1963 -----	14202
blunt cone-cylinder body with flared afterbodies, transonic static aerodynamic characteristics -----	10994	Soviet-bloc scientific conferences, reports -----	14137
blunt-nosed model, effects of nose cone angle and base cone angle on static aerodynamic characteristics, errata -----	3122	Soviet veterinarians -----	5392
blunt-nosed 10° half-angle, free-flight measurements of drag and static stability at Mach no. 15 -----	5506	union conventions, 1963, list -----	14484
blunted, static stability tests at Mach no. of 20 -----	1301	<i>see also</i> names of conferences, etc.— <i>also</i> subject of conferences.	
blunted 10° half-cone body (semi-disk), pressure and heat transfer measurements on flat face -----	11028	Confidential material, safeguarding, industrial security manual -----	4796
cones as decelerators at Mach nos. 1.57 to 4.65, aerodynamic characteristics -----	11065	Configurations: blunt delta, with 75° sweepback, subsonic aerodynamic characteristics -----	18134
80° total angle, water-film cooling at Mach number 2 for air-stream total temperatures up to 3,000° R -----	21000	delta, 79° clipped, rolling motions with wing-tip fins -----	20996
heat transfer to blunt conical bodies having cavities to promote separation -----	14590	forebody shape, effects on flow pattern of wing -----	11035
modified half-cone reentry vehicle, low-subsonic stability and control characteristics -----	14545	jet-canard, asymmetric penshape nozzles for attitude control -----	19906
short blunt, effects of nose bluntness, fineness ratio, etc., on static aerodynamic characteristics for planetary probes -----	16399	real time flight test display, feasibility study of data presentation -----	14905
short blunt 10° semivertex angle, static aerodynamic characteristics -----	5600	stiffened sheet containing sharp central notch, static strength prediction method -----	16407
torques induced by magnetic field. <i>see also</i> Conifers— <i>also</i> names of conifers.	5613	tilting-wing and tilting propeller models, effects of wing-cord propeller-diameter ratios at transition speeds -----	14560
Confectionery: current industrial reports -----	3574	wing-fuselage-store, origin and distribution of supersonic store interference -----	16359
including chocolate products, current industrial reports, summary, 1962 -----	11621	Conflict of Federal and State banking laws -----	17165
industry, candy and other products, outlook for 1963 and review of 1962 -----	5973	Conflict of interests: preventing on part of special Government employees -----	14650
sales and distribution, 1962 -----	11596	problems in SBIC's program, hearing -----	19045
sweeteners used by industry, competitive position in U.S. -----	12043	Congestive heart failure, guide for patient -----	20098
Confederacy, United Daughters of the, <i>see</i> United Daughters of the Confederacy.		Congo (Brazzaville): continued application of treaties concluded between United States and France, agreement -----	1530
Confederated Salish and Kootenai Tribes of Flathead Reservation, <i>see</i> Flathead Indians.		investment guarantees, agreement -----	1551
		investment law -----	5062
		newly independent nation, fact sheet -----	11291
		Congo (Léopoldville): agricultural commodities, agreements -----	1528, 1533, 1550, 5734
		Army area handbook -----	114
		continuing problem -----	4434
		fact sheet -----	18322
		immediate and future problems, hearing -----	9934
		import tariff system -----	8417

# JANUARY-DECEMBER

Entry	
Congo (Léopoldville)—Continued	
investment guarantees, agree-	11325
ment	
sending gift packages to	2404
visit to native king	12567
Congress, Joint Committee on Organi-	
zation of:	
establish—	
hearings	17334
report	17297
Congress of United States:	
code of Federal regulations	15502
congressional record—	
daily	3536
index	3537
87th Cong., 2d sess., bound vol-	
umes	9795-96,
11701-704, 13381-386, 16967-	
968, 18762-764.	
daily digest	18766
index	18765
Congressmen who cheat, article ap-	
pearing in Parade magazine,	
hearing	7998
directory—	
official edition, 88th Cong., 1st	
sess.	7817
pocket edition, 88th Congress	4659
legislative reorganization act,	
amend—	
hearings	8112
report	8087
major legislative actions, 88th	
Congress	9813, 11733.
13441, 15165, 17056,	
18792	
Members, travel outside U.S., per	
dium allowances and transporta-	
tion costs, limit, re-	
ports	13527, 13531
organization and operation report	8048
radio stations construction permits	
where Members of Congress	
are involved, hearings	19049
reports to be made to Congress,	
list	2032
women of 88th Congress, bio-	
ographies	14808
see also Congressional documents.	
Congressional committees:	
authorizing committees to sit	
through morning hour, report	19010
hearings, index Jan. 7, 1959-Jan.	
3, 1963, supp.	13387
Senate—	
committee staffing	9958
meeting during sessions, hear-	
ings	17334
Congressional directory, see Congress	
of United States.	
Congressional districts, 88th Congress,	
identification of counties and	
selected places	13302
Congressional documents:	
numerical lists, etc.—	
85th Congress, 2d session, er-	
rata	9330
87th Congress, 2d session	11217
Congressional guide to information	
services, Department of Agri-	
culture	2367
Congressional list (series)	17545
Congressional record, see Congress of	
United States.	
Congressional Reorganization Com-	
mission, establish, hearings	17334
Congressional serial set	1964-67,
4660-63, 6060-61, 7819-20, 9799-	
9802, 11705-707, 13388-390,	
15139-141, 16971-972, 18768-	
769, 20394.	
schedule of volumes—	
85th Congress, 2d session, errata	9330
87th Congress, 2d session	11217

Entry	
Conifers:	
California cone crops	6499, 19263
cones from fertilized trees, squirrel	
preference	12183
cutting in mixed swamps, upper	
Michigan	15579
direct seeding in Lake States	12188
jack pine stands, Minnesota, seed	
stored	6514
stands in Mountain States, compos-	
ite aerial volume tables	20697
see also Fir.	
Conley, John T., test and evaluation	
of 2200 Mc. parametric ampli-	
fier	13201
Conley Motor Express, Inc., motor	
carrier accident	8431
Conlogue, Robert M., costs of pro-	
curement and assembly of eggs	
in 3 Midwestern States	2128
Conneaut, Ohio, redevelopment area,	
statistical profile	4655
Conneaut Harbor, navigation improve-	
ment, hydraulic model inves-	
tigation	6378
Connecticut:	
county business patterns, activities	
covered by OASDI program	11614,
18669	
electric rate book	15492
four-town redevelopment area, ARA	
case book	20317
mineral industry, minerals year-	
book chapter	20954
population, 1960, characteristics	18648
public school finance program,	
1961-62	12073
women, legal status	7518
ZIP code directory	20031
Connectors (electric):	
type N, voltage standing wave ra-	
tio, 3/8" coaxial, measure-	
ment system operation pro-	
cedure	9288
Connolly, John M., protective effects	
of pretreatment with adreno-	
corticotrophic hormone in trau-	
matic shock	14919
Connor, Jon J., geology of Angostura	
Reservoir quadrangle, S. Dak.	6544
Connors, Mary M., relative red-green	
sensitivity as function of ret-	
inal position	9102
Conover, C. S., geology, etc., of Valle	
Grande and Valle Toledo, Sand-	
oval County, N. Mex.	19325
Conover, John H., cloud interpreta-	
tion from satellite altitudes	14900
Conrad, C. Eugene, automatic data	
processing of range vegetation	
information	6495
Consciousness:	
and brain, USSR study	15904
automata and life, USSR study	12321
Conscription:	
draft provisions of military service	
and training act, extend—	
hearings	6186, 8091
law	7821
reports	6139, 6160, 6272
exemption of sole surviving son	
whose father died as result of	
military service—	
hearings	13640
report	13603
legal aspects of selective service	9378
local board memorandums	3875
screening devices for selective ser-	
vice registrants who fall AFQT	
7 and 8	10831
selective service (periodical)	4187
selective service college qualifica-	
tion test, bulletin of informa-	
tion	3319
selective service regulations	4188

# INDEX 1963

	Entry		Entry
Conservation, <i>see</i> Natural resources— Range lands—Soil conserva- tion— <i>also</i> subjects.		Construction (Chinese periodical) : translations	10599
Conservation has gone to sea	4951	Construction equipment, <i>see</i> Building machinery.	
Conservation information, SCS-CI series	13050	Construction industry : apprentice dropouts	13231
Conservation notes	2286, 4949, 6452-53	Communist China, accounting for basic construction	14157
Conserving nutritive values in food	16740	construction activity, reports	3541
Consolazio, C. Frank : aspartic acid salts evaluation as anti-fatigue drugs effect on men	7685	construction authorized, Washing- ton, D.C., area	3538
dermal excretion of minerals	1813	construction reports	156, 3538-44, 15048
octacosanol, etc., as anti-fatigue drugs, effect on swimming rats— report on environmental tempera- ture and energy expenditure	7687	construction review (periodical)	3545
sweat excretion of nitrogen	1812	hospital, labor requirements, errata sheet	14463
Consolidated index—digest of reports of Interstate Commerce Com- mission involving motor car- rier operating rights	2447, 12264	housing authorized in individual permit issuing places, annual summary, 1962	15047
Consolidated index digest of reports of Interstate Commerce Com- mission involving rates and practices	2448, 6631	increasing growth under tax re- form program (remarks)	7498
Constitution Day, proclaim 17th of September each year, report	11979	Mongolia, 40 years	6725
Constitution of United States : amendments— equal rights, questions and an- swers	6213	National labor relations act, admin- istration, problems (address)— outlook for 1963 and review of 1962	5630
investigation— authorization, report	6251	permits— housing units, new	3539
proposals, 87th Congress, re- port	6286	residential construction, new	3540
nomination and election of Presi- dent and Vice President of United States, hearings	17318	small business set-asides, amend act, hearings	13793
prayers in school, permitting, hearings	4787	southern Florida, report	1451
presidential inability, hearings— proposed, 69th-87th Congress, list	15397	USSR— organization of planning	16108
authority of Senate to originate ap- propriations, etc.	9959	schedules and priorities, calcu- lation with aid of electronic computers	14170
constitutional rights— investigation, authorization, re- port	6252	translations	19770
of mentally ill in D.C., hearings— study, subcommittee activities, report	17320	wage and hour provisions, fair la- bor standards act, coverage	18364
Constitutional Rights Subcommit- tee, list of publications	19064	Construction machinery, <i>see</i> Building machinery.	
our Constitution and Government, Federal textbooks	621, 15629-630, 17543	Construction of Building for Museum of History and Technology for Smithsonian Institution Joint Committee report	20509
our Constitution lives and grows, Federal textbooks	622, 2365	Construction set-aside amendments	18930
rights of American Indians, hear- ings	2098, 4785, 12023	Consular and Migration Affairs Bu- reau, naming, reports	15282, 20584
text	6080, 9953, 13934	Consuls : consular affairs	14704
with analytical index, unratified amendments	11758	convention with Korea, text, etc.	8024
with index, etc., print as House document, reports	7933, 8084	foreign consular offices in U.S.	11295
Constitution Week, bulletin	17541	treaty with Muscat and Oman, text, report	20527
Constitutional Convention of 1787, summary and analysis of de- bates with special reference to Senate authority to originate appropriations	9959	Consultant Group on Nursing, <i>see</i> Surgeon Generals' Consultant Group on Nursing.	
Constitutional rights, <i>see</i> Constitu- tion of United States.		Consultants : labor, reporting requirements un- der labor-management report- ing and disclosure act	12777
Constitutions, State, restrictions upon structural, etc., powers of local government	4329	medical, in State vocational reha- bilitation program, handbook	9482
<i>see also</i> China—Dominican Repub- lic—Germany—Syria— <i>also</i> names of organizations.		Consumer Advisory Council report, Oct. 1963	20615
Construction, <i>see</i> Building—Construc- tion industry—Installations (military).		Consumer credit, <i>see</i> Installment credit.	
		Consumer goods, <i>see</i> Commercial products.	
		Consumer income, <i>see</i> Income.	
		Consumers : baked products, quality, composi- tion, yield and preparation time of various market forms	14860
		buying intentions— automobiles, etc.	6003, 11635, 16000
		new indicators (speech)	11688
		series	6003, 11635, 16900
		survey	529

# JANUARY-DECEMBER

	Entry
Consumers—Continued	
citrus and other juices—	
purchases	3551
purchases by family characteristics	353
cosmetics, protection under law	17467
expenditures and income, 1960—	
Atlanta, Ga.	1166, 7151
Austin, Tex.	7156
Baltimore, Md.	7160, 12786
Boston, Mass.	1167, 7152
Buffalo, N.Y.	9050
Cedar Rapids, Iowa	10890, 14455
Champaign-Urbana, Ill.	12790, 14459
Chicago, Ill.	1165, 7150
Cincinnati, Ohio	18031-32
Cleveland, Ohio	12787-788
Dallas, Tex.	10892, 14457
Dayton, Ohio	19788-789
Detroit, Mich.	7145-46
Gallup, N. Mex., Klamath Falls, Oreg.	16274
Hartford, Conn.	19790-791
Indianapolis, Ind.	7154, 14452
Los Angeles, Calif.	12789, 14458
Nashville, Tenn.	19786-787
New Jersey, northern	7157, 12784
New York, N.Y.	1164, 7149
Orlando, Fla.	10891, 14456
Philadelphia, Pa.	5437, 12782
Pittsburgh, Pa.	7155, 14453
Portland, Maine	7158, 14454
St. Louis, Mo.	7159, 12785
San Francisco, Calif.	7147-48
Seattle, Wash.	7153, 12783
small cities in southern region, Cleveland, Tenn., Griffin, Ga., etc.	14460
Washington, D.C.	1163, 14451, 16273
FDA information materials, list	17468
food standards, requirements to promote fair dealings, etc.	19247
foods, cost of convenience and home prepared foods, comparisons	14865
helpful information and facts, list of publications	18276
markets, current materials, list	13261
nonmarket, restrictions on purchase of goods in retail trade, Czechoslovakia	1078
nutrition and consumer-use research, publications, list	20269
older and younger, impact of rising prices (remarks)	18046
practices in handling and storing commercially frozen foods, two cities, two seasons	16742
price index	3548
by individual city and commodity	3549
conversion to 1957-59 standard reference base period	10909
seasonal factors, June 1953-May 1961	14474
selected items and groups	3550
short description	9063
protection activities, report	13569
protection by FDA, science working through law	12146
protection from pesticide residues	20691
Soviet Union and United States	9062
Wichita, Kans., acceptance of Redi wheat, new canned cooked bulgur	4359
Consumption (economics):	
census of manufactures, 1958, selected materials consumed	5992
model, compiling and analyzing, USSR study	2754
USSR, planning of public funds	767
Contacts (electric), see Electric contacts.	

	Entry
Contagion and contagious diseases:	
dangerous infectious diseases, etc., USSR studies	20767
District of Columbia, prevent spread, amend act—	
hearing	10008
law	20426
reports	6159, 13786
early differential diagnosis of infectious diseases, USSR study	849
morbidity and mortality weekly report	3931
prophylaxis of infectious diseases and its improvement, USSR study	2607
publications, price list	1397
World War II, infectious diseases, see also names of diseases.	9666
Containers:	
articles imported in containers, marking requirements—	
hearing	8103
reports	4750, 11988
closures, current industrial reports	3574, 13291
concrete, reinforced stressed construction assembly for petroleum products, USSR study	2865
Federal item identification guides for supply cataloging, supplements	3654
glass—	
current industrial reports	9716
industry, outlook for 1963 and review of 1962	4522
industry reports	3552
metal, damaged, judge volume reduction from photographs of complex, irregular shapes	11351
one-bale seed cotton, use at cotton gins	18401
shipping—	
short hauls of icepacked poultry	5830
structural integrity for radioactive materials, study of transport operations, etc.	5941
see also types of containers.	
Contamination:	
environmental, off-site, from nuclear explosives, Nevada Test Site, Sept. 15, 1961-Sept. 15, 1962	18599
nuclear submarine atmospheres, analysis and removal of organic contaminants	11162
radioisotope, postmortem discovery in man, USSR study	17930
soils—	
radiation hazards	10135
reclaim	10136
water, radiological, biological, and chemical, methods of removal of contaminants	16520
Contested election:	
Odegard vs Olson, notice of dismissal, etc.	4725
hearing	9938
Contests, Ability Counts Contest, announcement	1157
see also names of contests, or subjects involved.	
Continental Airlines, Inc., accident	178
Continental Shelf:	
and slope, Atlantic Coast, program for study	19307
outer Continental Shelf lands act, as extended	393
Continuity of your State and local government	4829
Contours:	
SAM, model B, instrument for measuring changes of surface contours	74
study of surface contour changes after tooth extraction	7640

# INDEX 1963

Entry	Entry
Contract Appeals, Corps of Engineers, Board of, <i>see</i> Engineers Corps Board of Contract Appeals.	
Contract farming and vertical integration-----	18182
Contractions, <i>see</i> Abbreviations.	
Contractor report NASA CR (series)-----	18119-123, 19889-899
Contractors:	
civilian agencies seeking business from Army Materiel Command, guide-----	16823
Defense Dept., air accommodations, use of 1st-class, GAO report--	17506
farm labor, registration--	
hearings-----	10021, 11895
reports-----	11819, 11972
prime, selling to Navy-----	11196
space system, quality program provisions for-----	1264
Veterans Administration medical research and development, indemnification, report-----	18862
<i>see also</i> Government contracts.	
Contracts:	
contract report, Waterways Experiment Station-----	19151
electric transmission construction contract, labor and materials.	1441, 11257
insert-----	14683
Midwest feed programs, gains and losses for manufacturers, etc.--	8150
REA distribution line extension, construction contract-----	3313
regulations governing reports on obligations-----	11353
<i>see also</i> Collective bargaining--Government contracts.	
Contributions to biology of Philippine Archipelago and adjacent regions, title page, etc., v. 14--	11114
Control (vehicle), <i>see</i> Aircraft--Airplanes--Helicopters--Satellites--Spacecraft.	
Control lines, maintenance, FAA handbook-----	8218
Control surfaces, <i>see</i> Missiles.	
Control systems:	
active, for spinning body, simulator study-----	3139
application of time-optimal control theory to launch vehicle regulation-----	11077
attitude--	
for finned-vehicle, analytical study of effects of compensating networks on system characteristics-----	7266
of satellite, using inertia wheels and magnet, simulator study--	19930
calculating entropy of output processes with use of amplitude characteristics, USSR study--	12332
classification according to control principles, USSR study--	8666
control operations and objectual actions, comparative analysis, USSR study-----	16037
control theory, USSR study-----	8486
driving systems for farm machinery, study by simulation--	5398
for control of terminal phase of satellite rendezvous-----	1323
bibliography-----	1865
continuous self-adjusting, statistical theory, USSR study-----	6893
contractor, 3d order, with zeros in their transfer functions, investigation, errata-----	11016
cybernetics and theory of control systems, USSR studies-----	773, 14269
extremal, USSR study-----	2648
modes-----	1315
Control systems--Continued	
nonlinear attitude, techniques for analysis for space vehicles----	47
nonlinear closed-loop, with stationary stochastic inputs, method for analyzing-----	19939
process-control instrument industries, outlook for 1963 and review of 1962-----	5981
sampled data human operator models, investigation-----	5848
self-learning systems, principles of design, USSR study-----	8540
spinning vehicle, pitch control during flight test-----	14576
structural methods in theory of control and electric automation, USSR study-----	10785
surface-to-air missile weapon control, engineering design handbook, OKD pamphlet-----	3245
track firing programmer and control system, modification-----	5857
transistorized, for information storage device using piezoelectric substances, USSR study--	5211
X-15 flight, operational experiences and characteristics-----	3128
Controlled environment facilities, survey-----	16526
Controls (aircraft), <i>see</i> Aircraft.	
Convalescence, after surgery, July 1960-June 1961 statistics-----	14676
Convection of heat, <i>see</i> Heat transfer.	
Convection stack, device for ridding pit toilets of bad odor-----	10218
Convention of American Instructors of Deaf, proceedings of 40th meeting-----	17198
Conventions, <i>see</i> Conferences, congresses, etc.	
Conventions and treaties, <i>see</i> subjects.	
Converters, magnetic core voltage-to-frequency converter-----	5606
Conveyances, aircraft, validity of titles, hearing-----	17172
Conveyers, Klev Tochelektropribor Plant, assembly of electric measuring sets, USSR study--	16193
Cook, Allan F., ablation of stone meteors-----	14692
Cook, Warnilla A., demographic, etc., characteristics, patients of outpatient psychiatric clinics-----	16427
Cook Inlet:	
aeromagnetic reconnaissance of area-----	6553
Bradley Lake, hydroelectric power, engineer report-----	421
departmental edition-----	227
document edition-----	13974
king salmon, inventory study--	
Cooke, William C., ecology of pea aphid in Blue Mountain area, etc-----	18445
Cooke County, Tex., oil recovery, effects of water injection-----	9135
Cookery:	
baked products, consumer quality, preparation time, yield, etc.--	14860
pork and its products, cook thoroughly-----	1644
publications, price list-----	1393
<i>see also</i> Recipes.	
Cooking appliances, current industrial reports-----	3574, 9717
Coolants:	
organic reactor--	
essential data, 4th quarterly report, Jan. 1-Mar. 30, 1962--	5934
irradiation loop studies-----	14991
technology, progress report-----	11559



	Entry		Entry
Coolants—Continued		Cooper, Maurice R., fineness price	
reactor—		differentials for Texas High	
fog flow, behavior	5949	Plains cotton	17358
radiolysis of organic fluids,		Cooper, W. Clark, estimating occupa-	
annual report	15013	tional disease hazards, etc.	9339
wet steam, investigation	5949	Cooperative education program, De-	
wet steam under fog flow con-		partment of Army	18548
ditions, investigation	4497	Cooperative farm credit system, func-	
solid-in-gas suspensions as heat		tions and organization	10098
transport mediums	14520	Cooperative research monograph se-	
use of combined compressor injec-		ries	8181, 10076
tion and afterburning in tur-		Cooperative research program, appli-	
bojet engine for thrust augmen-		cation instructions for research	
tation	5513	contracts	15424
see also names of coolants.		Cooperative State Experiment Station	
Cooley, John H., site requirements		Service:	
and yield of paper birch in		appropriations, 1964, Agriculture	
northern Wisconsin	576	Dept., hearings	7979
Cooley, William C., space-radiation		CSESS series	10025-26
effects on solar-cell power sys-		Cooperatives:	
tems, handbook	18130	farm credit system, functions and	
Cooling:		organizations	2236
afterburner-wall temperatures, ef-		frozen food lockers, appraisal	19158
fect of pressure level	5527	meeting challenge of future (ad-	
aircraft ejectors having short		dress)	11468
cylindrical shrouds, perfor-		programs, plant pest control, west-	
mance characteristics	10972	ern region, 1961	7552
farmhouse design and equipment		rural, United States, general infor-	
for summer	9563	mation	19363
gaseous-film, of rocket motor	19935	see also Farmers' cooperative or-	
helium film, on hemisphere at Mach		ganizations—also names of	
no. of 10	1311	commodities—also names of	
precooling, effects on market qual-		cooperatives.	
ity of globe artichokes	20286	Cooperman, Irene G.:	
regenerative and radiation, effects		employment adjustment of veterans	
on electrothermal thruster		with histories of psychosis and	
performance	20979	psychoneurosis	11372
restricted areas from isothermal		they return to work, job adjust-	
site, influence on galvanic skin		ment of psychiatrically dis-	
response	20313	abled veterans of World War	
small air-cooled turbine rotor		II and Korean conflict	9481
blades, temperatures and cool-		Coordinated color identifications for	
ant pressure losses	5528	industry	1332
thermal characteristics of hydro-		Coordinates, State plane coordinate	
cooled peaches	18447	projection tables	4635
turboprop engine, use of corrug-		Coos Bay, Oreg., coastal sand-dune	
ated-insert air-cooled turbine		area, ground-water resources	2356
blade, cascade investigation	1268	Coots, see Ralls (birds).	
vacuum precooling of different vege-		Copepods:	
tables, comparison	9582	Calanus finmarchicus and Calanus	
water-film, total-angle cone at		glacialis, fat consumption,	
Mach no. 2 for airstream total		USSR study	16136
temperatures up to 3,000° R.	21000	National Museum bulletin, title	
Cooling systems:		page, etc.	11114
air, hydraulic design for multi-		Copper:	
stage gas turbines by using		blister, deoxidation by gaseous re-	
electric models	11082	duction	1249
room-temperature shear and com-		copper-nickel alloys, mechanical	
pression tests of stiffened		properties at elevated tempera-	
panels with integral or at-		tures	6810
tached cooling circuits	9148	determination in tungsten metal	
Coombs, Charles A., Treasury and		and tungstic oxide	16346
Federal reserve foreign ex-		Industry—	
change operations	8261, 19209	mineral industry surveys,	
Cooper, Glenn A.:		monthly	3558
design for hardwood bench	17478	report, annual, 1963	11597
spindle guard makes shaper safer,		report, quarterly	3557
more efficient	13984	mill and foundry products, current	
use red oak and hickory for picnic		industrial reports	3575, 11622
tables	17500	minerals yearbook chapter	19828
wood brick strip panelling, new		mining methods and costs, Inspira-	
way to decorate	17477	tion Consolidated Copper Co.	
Cooper, H. H., Jr., ground-water		open-pit mine, Gila County,	
movements and bank storage		Ariz.	7210
due to flood stages in surface		mining, milling, smelting, San Man-	
streams	19322	uel Copper Corp., Pinal Coun-	
Cooper, James D.:		ty, Ariz., errata	8053
abrasive materials	1196, 18062	N <sup>+</sup> , N <sup>2+</sup> , and A <sup>+</sup> incident from 0.5	
kyanite and related minerals	14502	to 4 kev, momentum accommoda-	
Cooper, L. Gordon, Jr., flight May		tion	19932
15-16, 1963	16412	open-pit mining and concentrating	
Cooper, Marcus F., remarks, Dec. 19,		methods and costs, American	
1962	4408	Smelting & Refining Co.	9113

# INDEX 1963

	Entry		Entry
Copper—Continued		Cornea, epithelial cells, study of mitotic cycle by means of tritium-tagged thymidine, USSR.....	16153
ores, segregation by direct-firing methods.....	10950	Cornelius, Edward G., pleasure boating industry in Tennessee.....	1447
oxidation and irradiation effects, study.....	14964	Cornus florida, <i>see</i> Dogwood.	
scrap, consumers, mineral industry survey, monthly.....	3559	Corporations:	
tungsten-fiber-reinforced composites, stress-strain behavior.....	19917	banking and financing, foreign operations under Federal reserve act, regulations.....	19208
vacuum arc melting and casting.....	14519	continuity of management in event of nuclear attack.....	11652
Copper mills, industry, outlook for 1963 and review of 1962.....	4535	corporate reorganization releases, SEC.....	3561
Copper sulfate, report, monthly.....	3560	District of Columbia, business corporation act, amend—	
Copper sulfide, oxidation leaching in acidic pulps.....	7224	law.....	17041
Copperweed, livestock poisoning in Western States, reducing losses.....	14856	reports.....	9859, 13735
Copyright:		doing foreign banking or financing that maintain reserves accounts with Federal reserve banks, 1962, list.....	4927
catalog of copyright entries.....	338-339, 2107-10, 4790, 10027, 12031, 13826, 19070-71, 20614.	federally chartered, uniform audit requirements, report.....	9911
code of Federal regulations.....	4922	income tax rate, extension—	
enactments, U.S. laws 1783-1962.....	15403	hearing.....	13801
general information.....	19072	law.....	13426
law, general revision, report, discussion and comments.....	8002	reports.....	11831, 11840, 13718
laws, investigation—		income tax, reduction, hearings.....	20607
authorization, report.....	6259	income tax returns, statistics, 1960-61.....	630, 2376, 14067, 15644
report.....	8058	manufacturing, quarterly financial report.....	4125
Copyright Office:		sales, profits, and dividends.....	4168
bulletin.....	15403	Corpus Christi, Tex.:	
circulars.....	19072	H-23B helicopter accident, crash injury investigation, report.....	20203
report, 1962.....	10926	International Airport, weather observations, hourly, decennial census.....	11402
Corals:		Correctional industries fund, establish for D.C. government, report.....	13737
Lockport dolomite in New York, re-description of 3 species.....	6555	Correctional officers:	
Silurian, from Maine and Quebec.....	6556	examination announcement.....	194
Corbett, Edward S., ponderosa pine reproduction in relation to seed supply at Challenge Experimental Forest.....	10226	amdt.....	9745
Core drilling, oil yields from core and drill-cutting sampling of Green River oil shales.....	19870	Corrective therapists, <i>see</i> Exercise therapists.	
Core program:		Corregidor-Bataan Memorial Commission:	
selected references, 1961-63.....	17362	activities, report, 1962.....	4715
unpublished research 1956-62.....	17363	appropriations, authorizing, reports.....	17111, 18857
Cores (magnetic):		Correlation (statistics):	
voltage-to-frequency converter.....	5606	correction of correlation with dichotomous variable for restriction in range.....	7623
Cores (reactors), <i>see</i> Reactors (atomic).		use to improve estimates of mean and variance of streamflow.....	5023
Cortell, Sam R., calculations of potential and effective diffusion constant in polyelectrolyte solution.....	14602	Correlation method for recognizing patterns, USSR.....	5274
Cork:		Correlometer, apparatus for correlative analysis of physiological processes, USSR study.....	10600
stoppers, temporary suspension of duty—		Correspondence:	
law.....	11724	aids, CA series.....	9547, 13157
reports.....	4743, 9976	form and form letter management at field stations, VA pamphlet.....	20222
Corkboard:		Correspondence schools and courses:	
insulation, temporary suspension of duty—		Industrial College of Armed Forces, course on economics of national security.....	20759
law.....	11724	application information.....	14082, 19372
reports.....	4743, 9976	information booklet.....	2149
Corliss, William R., neutron activation analysis.....	20334	etc.....	9267
Corn:		Navy medical officers, clinical laboratory procedures, pt. 2.....	19995
ear, drying by mechanical ventilation.....	5834	Navy, training manuals and correspondence courses, list.....	7360
futures—		Corridon, Geraldine A., freeze-drying of foods, list of selected references.....	14593
commitments of traders.....	3530		
marketing, 1961-62.....	6056		
trading and open contracts.....	3752		
nitrogen status, evaluation by tissue tests.....	7542		
Southern States, controlling sugarcane beetle.....	9575		
Corn Belt, commercial farms, costs and returns, 1962.....	8146		
Corn borer, <i>see</i> European corn borer.			

	Entry
Corrosion and anticorrosives:	
acid corrosion inhibitors, adsorption mechanism, USSR study.....	1040
bibliographic index of USSR works on corrosion and protection of materials.....	10640
concentrated LiOH effects on steel corrosion in steam generating systems, laboratory studies.....	3231
corrosion research in Soviet Union, visit to Soviet corrosion chemistry institutes.....	7717
high temperature corrosion studies.....	10964
hydraulic and pneumatic systems corroded units performance, USSR study.....	5145
inhibitors to protect inside surfaces of tanks in oil tankers, USSR study.....	6802
mobile tanks for petroleum products, anti-corrosion protection, USSR study.....	6824
multi-grounded rural electric lines, relieving underground corrosion.....	14684
multipurpose corrosion inhibitor for brake fluid.....	21064
reactor materials, articles.....	1818
reinforcement steel corrosion in porous concrete, USSR study.....	6701
sodium mass transfer, corrosion sample data 1962.....	18570
stress corrosion for structural alloys at room and elevated temperatures.....	7601
underwater metal structures of hydroelectric power stations, USSR study.....	10813
welded joints of 1Kh18N9T steel, influence of heat treatment on corrosion resistance, USSR study.....	5241
zirconium and alloys, corrosion mechanism.....	14978
Corsets, current industrial reports.....	11618
Corson, Edward M., analysis of 5-year physics program at Moscow State University.....	8174
Corte, Arturo E.: frost behavior of soils, etc.....	2189
vertical migration of particles in front of moving freezing plane.....	4842
Corte Madera Creek: flood control survey, engineer report— departmental edition.....	2193
document edition.....	1989
Corticosteroids in human parotid fluid following oral hydrocortisone dosage.....	9631
Corticotropin, doses, graded, parotid fluid steroid responses.....	14922
Cortright, Edgar M., automated spacecraft of United States.....	19887
Corundum, sintered, properties, literature data.....	18519
Cosenza, Benjamin J., simple device for dehairing insect egg masses.....	10232
Cosmetics:	
F.D.C. regs.....	4975, 10203, 12143-145
food, drug, and cosmetic act— enforcement and compliance— FDA 1963.....	6472
report, monthly.....	4143
notices of judgment.....	15541
text.....	4976
food, drug, and cosmetic laws, State officials enforcing, directory.....	13979
Import detentions, report.....	12147
industry, outlook for 1963 and review of 1962.....	4519

	Entry
Cosmetics—Continued	
read labels, FDA publication.....	19246
what consumers should know.....	17467
Cosmic biology, <i>see</i> Space biology.	
Cosmic dust:	
Explorer VII micrometeorite penetration experiment.....	9180
interplanetary debris, role in planetary atmospheres.....	19893
measurements of distributions of interplanetary dust.....	21016
showers, direct measurements.....	3146
space density of atmospheric dust in altitude range 50,000 to 90,000 ft.....	1496
<i>see also</i> Micrometeoroids.	
Cosmic flights and science, USSR.....	15846
Cosmic mineralogy, new branch of science.....	18177
Cosmic rays:	
and nuclear processes within large silver chloride crystals, delineation of tracks.....	7255
cosmic factors, influence on blood system, USSR study.....	10661
energy spectrum Explorer XII instrumentation for study.....	12856
low frequency power spectrum variations during IGY.....	9170
primary radiation—	
Cerenkov - scintillation counter measurements of nuclei.....	16375
charge and mass identification by scintillation counter telescope.....	16377
salient features.....	18241
re-entrant albedo.....	21020
solar cosmic ray event, 1960.....	3157
hydrogen, helium, and heavy nuclei.....	11051
stable and radioactive nuclides induced in meteorites.....	14570
USSR study.....	1056
Cosmogony, <i>see</i> Universe.	
Cosmonauts:	
new cosmic tandem, Valeriy Bykovskiy and Valentina Tereshkova, USSR study.....	20905
USSR, training, drills, etc.....	15734
voyage of Vostok-3, activities during flight.....	19448, 20761
COSPAR, <i>see</i> Space Research Committee.	
Cossairt, K., recirculation principle for ground effect machines, investigation of improvements by major modifications to MCTV.....	18352
Cost:	
data, relation to military procurement, hearing.....	11886
Defense Department cost reduction program, report 1963.....	17347
farm costs and returns.....	2123
8146, 10050, 12045-46, 15412-413.....	8146
commercial corn belt farms.....	2123, 12046
commercial cotton farms.....	10050
commercial egg producing farms, New Jersey.....	12045
commercial tobacco farms, North Carolina.....	15413
commercial wheat farms, Pacific Northwest, Northern and Southern Plains.....	16731
farms, commercial, by type, size, and location.....	1262
NASA PERT and companion cost system handbook.....	7723
reduction through better management in Federal Government.....	
<i>see also</i> names of commodities, e.g. Eggs— <i>also</i> subjects.	
Cost accounting, <i>see</i> Accounts and accounting.	

# INDEX 1963

	Entry		Entry
Cost and standard of living:		Cotton—Continued	
conditions in—		futures—	
Australia .....	6595	commitments of traders .....	3529
Brazil .....	2427	trading and open contracts .....	3747-48, 3752
East Africa .....	12257		
Ecuador .....	6602	trading, monthly .....	4240
Great Britain .....	2432	imports of manufactures, foreign	
Greece .....	6592	trade reports .....	3729
Guatemala .....	6601	laminated plastics, future in .....	14871
Hong Kong .....	12254	legislation, hearings .....	2047
Japan .....	10341	man-made fiber staple, and linters—	
Libya .....	5063	current industrial reports .....	3574
Morocco .....	10336	summary, 1961-62, current in-	
Netherlands Antilles .....	6610	dustrial reports .....	4581
Nigeria .....	8381	mechanically harvested, how pro-	
Singapore .....	8382	ducers can preserve quality .....	11455
Sweden .....	2389	micronaire fiber readings—	
conditions of repatriated in North		new service for producers .....	11427
Korea .....	15562	service of USDA aids producers .....	11428
low-income families, suggestions for		Mississippi Delta variety, cotton	
improvement .....	10304	ginning practices, effects on	
marked improvement in income of		market quality, 1958-59 .....	4360
middle-income families (ad-		multiple lint cleaning at gins, ef-	
dress) .....	20932	fects on bale value, etc. ....	11457
Costa, Caterina, relief .....	17207	Oklahoma cooperatives .....	6380
Costa, Sister Maria C., <i>see</i> Costa,		pooled allotments of Billie Sol	
Caterina.		Estes, Agriculture Dept. han-	
Costa Rica:		dling, hearings .....	330, 4780
alliance for progress programs, re-		price statistics, monthly .....	3566
port on study mission .....	8023	price support programs and acreage	
print as S. Doc., report .....	20571	allotments, hearings .....	12003
Army mission agreement .....	14728	prices, spot quotations .....	4204
defense, furnishing articles and		problems of proposed legislation	
services, agreement .....	1536	(address) .....	14849
economic, technical, and related as-		production—	
sistance, agreement .....	1524	and distribution .....	9712
labor law and practice .....	9045	and exporting problems, role of	
sending gift packages to .....	2405	Agriculture Dept. (address) ..	20276
study mission report .....	9803	crop of 1962 .....	13280
Costilla Creek, compact, amendment,		monthly release .....	3567
report .....	18864	Soviet Union, report of U.S. tech-	
Cots, <i>see</i> Beds.		nical study group, addendum ..	13187
Cottage cheese, <i>see</i> Cheese.		program, modification, message	
Cotter, Perry G.:		from the President .....	4721
sand and gravel .....	19877	purchase programs, 1959 and 1960,	
slag, iron-blast-furnace .....	18106	Commodity Credit Corpora-	
stone .....	19879	tion, warehousing operations,	
Cotton:		GAO review .....	5010
acreage allotments, transfer from		quality survey, fiber and processing	
one farm to another in case of		tests, summary .....	11451
natural disasters—		reports for ginning .....	4257
law .....	9808	response to 2,4-D and related	
report .....	7958	phenoxo herbicides .....	18446
broad woven goods, current indus-		sheeting, workers' petition for ad-	
trial reports .....	3575, 20352	justment assistance, Tariff	
classification under cotton futures		Commission report .....	14740
legislation, regulations of Agri-		sold for export, organization and	
culture Department .....	9535	financing of U.S. trade, foreign	
cloth, prices of cloth, raw cotton,		buying practices, etc. ....	15542
and mill margins .....	4104, 16707	spinning performance test, evalua-	
commercial farms, costs and re-		tion .....	1617
turns .....	2123, 12046	supply function in Imperial Valley,	
cotton and other materials pur-		Calif .....	8155
chased for car interiors .....	16748	Texas High Plains, fineness price	
cotton and related data, statistics,		differentials .....	17358
1925-62 .....	9588	textile cycle, nature and trend ..	11684
cotton situation .....	3568	textiles—	
detecting, etc., mechanical picker		international arrangements, Com-	
lubricants on cotton .....	1631	merce Dept. activities (re-	
differential harvesting .....	1630	marks) .....	18754
domestic, price equalization—		International trade, agreement	
hearings .....	6181	with other Governments .....	7446
research program, etc., reports ..	11827, 15253, 9573, 3562, 18422, 7573, 3720, 6479	trade agreement with—	
facts .....		Jamaica .....	21136
fiber and processing test results ..		Spain .....	21131
fiber quality, preserving in ginning ..		trade, arrangement between U.S.	
fibers, length determination by elec-		and Japan .....	20177
trical resistance measure-		thrips on cotton, how to control ..	32
ments .....	7573	Turkmen SSR, shortcomings in	
foreign agriculture circulars .....	3720	cotton growing, USSR study ..	15954
foreign trade prospects .....	6479	upland, grade and staple .....	3628
		USSR production, report of U.S.	
		technical study group, adden-	
		dums .....	11465, 16762

# JANUARY-DECEMBER

	Entry		Entry
Cotton—Continued		Counseling—Continued	
varieties planted—		services in elementary school.....	376
in early producing section of		State Department of Education	
Texas, 1963.....	13151	personnel, directory.....	19096
1959-63.....	14825	Counselors:	
weed control, planter-sprayer equip-		counselor educators, directory.....	2151
ment for precision placement of		meaning of manpower development	
herbicides.....	18400	and training act of 1962.....	14440
weekly cotton linters review.....	4294	Counterpart funds, for agricultural	
weekly cotton market review.....	4295	conferences, make available,	
weekly report of on call positions		hearings.....	13635
and transactions in spot cot-		Counters, fluid flip flops and counter-	16472
ton.....	4298	see also Electronic counters—	
woven goods finished, current in-		Pulse counters—Scintillation	
dustrial reports.....	18680	counters.	
see also names of manufactured		Counties:	
articles and materials.		county business patterns—	
Cotton cloth, see Cotton.		employment, taxable payrolls,	
Cotton gins and ginning:		etc.—	
consolidated cotton report.....	3563	announcement and order form.....	11604
cotton ginnings—		Mountain States.....	15054
by counties.....	3564	OASDI program, United States	
by States.....	3565	summary.....	16889
practices, effects on market qual-		county list of post offices, 1963.....	16484
ity of cotton.....	4360	data book, errata sheet.....	4577, 4673
reports.....	4257	see also subject involved.	
cottonseed handling.....	5840	Counting devices, pneumatic traffic	
equipment—		counters for recreation visits	
improved, pink bollworm kill.....	13184	and use estimates, instructions	
1963.....	14824	for using.....	12193
laboratory gin, evaluation.....	18399	Countries, see Foreign countries.	
multiple lint cleaning at gins, ef-		Country life:	
fects on bale value, etc.....	11457	population, facts and trends (pa-	
preserving fiber quality in cotton		pers).....	2259
for maximum returns.....	18422	rural fire defense, preparation for	
use of one-bale capacity seed cotton		survival.....	4370
containers.....	18401	County business patterns, reporting	
Cottonseed:		units, etc. under OASDI pro-	
handling at gins.....	5840	gram.....	11614, 13281-286,
one-bale capacity container for use		15049-55, 16889, 18669-678	
at cotton gins.....	18401	Coupled dynamic response of tank	
protein for animal and man, pro-		partially filled with liquid and	
ceedings of conference.....	1655	undergoing free and forced	
quality, 1962.....	18383	planar oscillations.....	16408
Cottonseed meal, futures trading and		Couplers (directional):	
open contracts.....	3751	coaxial, Narda 3003-10, etc., Navy	
Cottonseed oil:		calibration program, technical	
futures, commitments of traders.....	3529	manual.....	9300, 14636,
futures trading and open contracts.....	3748	0 to 30 db coupling, 2.60 through	
Coulee Dam National Recreation		26.50Gc(kMc), Navy calibration	
Area, general information.....	18203	program Navy technical manual	
Coules, John:		waveguide, H & X band 0 to 30 db	
observer tolerance of form trans-		coupling, technical manual,	
formation as function of form		Navy calibration program.....	20006
complexity.....	14914	Couplings, cargo resupply train con-	
selection of code-names for com-		cept.....	21143
munications systems.....	1770	Courses of study, see Curriculum.	
Council for Economic Mutual Assist-		Court of Claims:	
ance:		cases, calendar.....	3570
recent developments, USSR study.....	8556	cases decided.....	8130, 15404,
scientific-technical cooperation, de-		index.....	8130
velopment, USSR study.....	8696	commissioners, increase, report.....	9968
Council for Planning and Coordina-		judge, nomination of James R. Dur-	
tion of Medical Science, order		fee, report.....	20538
concerning, East Germany.....	12308	judgments rendered, list.....	4764
Council of Economic Advisors:		Court of Customs and Patent Ap-	
annual report—		peals:	
departmental edition.....	3258	cases adjudged.....	4245, 6306
document edition.....	2034	customs cases adjudged, Oct. 1961-	
member, nomination of John P.		Oct. 1962.....	10029
Lewis, hearing.....	10002	Court of Military Appeals:	
Counseling:		court-martial reports, holdings and	
Army recruiting & career counsel-		decisions.....	17344
ing journal.....	4136	judges to hold office during good	
automation, its implications for		behavior—	
counseling.....	3022	hearings.....	11883
help for disabled through vocational		reports.....	13538, 13587
rehabilitation.....	9484	report, 1962.....	8134
national defense education act of		ten-year chronology, 1951-61.....	4799
1958, NDEA and higher educa-		Court reporters, see Reporters and	
tion (periodical).....	3954	reporting.	
service for youth.....	4833		



# INDEX 1963

	Entry		Entry
Courts, Mongolian People's Republic, judicial structure.....	12430	Crack propagation in low-cycle fatigue of mild steel.....	14686
see also District Courts—also names of courts.		Crack toughness of 2 high-strength sheet steels.....	11192
Courts martial and courts of inquiry: Judge Advocate General boards of review and Court of Military Appeals reports, holdings and decisions.....	17344	Cracking plants, see Petroleum refineries.	
manual, 1951, addendum.....	4791	Cracking process, radiation thermal, of hydrocarbons.....	18517
military justice handbook, trial counsel and defense counsel.....	4452	Craft (nautical): small, Federal item identification guides for supply cataloging, supplements.....	3660
trial guide for presidents and members.....	3215	Crafts, Edward C.: remarks—	
Courts of United States: appropriations, 1964—		Nov. 16, 1962.....	1379
hearings.....	11878	Jan. 19, 1963.....	3247
report.....	11848	Feb. 2, 1963.....	5665
district judges representation on judicial councils, report.....	13701	Feb. 26, 1963.....	7380
Federal judicial system, study—		Mar. 13, 1963.....	7381
authorization, report.....	6254	June 12, 1963.....	12967
report.....	9970	Oct. 28, 1963.....	21065
witness' fees in habeas corpus cases and forma pauperis proceedings, payment by U.S. marshal, report.....	11810	Craftsmen, see Labor.	
see also District Courts—also names of courts.		Craig, Roger A., thermal radiation from ablation products injected into hypersonic shock layer.....	18159
Coventry Center quadrangle, R.I., bedrock geology.....	19298	Crahn, Dorothy L., teaching machines and programmed materials in mathematics.....	2172
Cover, Margaret A., relief.....	17238	Cramblit, D. C., lunar surface ballistics and spacecraft landing, etc.....	7250
Cow Creek: flood control, engineer report—		Cramer, Earl H.: identifying overly anxious patient in impacted 3d molar surgery, psychiatric aspects of SAM 2-man space cabin simulator.....	18500
departmental edition.....	406	Cramer, Owen P., 1962 fire season in Pacific Northwest.....	8292
document edition.....	258	Crampon, L. J., use of outside information in small firms.....	1466
Cow Valley, Oreg., ground-water resources.....	613	Cranberries: indicated production, 1963.....	18339
Cowbirds, parasitic, host relations.....	12915	production, use, value, 1961-62.....	18340
Cowhig, James D.: age-grade school progress of farm and nonfarm youth, 1960—		Crandall, Stephen H., scaling laws for material damping.....	3132
correction notice.....	20625	Crandallite, strontium sorption studies.....	8333
school dropout rates among farm and nonfarm youth.....	19088	Crandell, H. C., geology and ground-water resources of Southold, Suffolk County, N.Y.....	20742
Cowley County, Kans., waterflooding projects and pressure-maintenance project, 1963.....	12829	Crane, Harold L., preliminary evaluation of 2 jet-transport simulators for investigation of landing-contact conditions.....	1293
Cows: dairy—		Crane, J., uranium carbide as nuclear fuel.....	15017
feed additives, minerals and vitamins for dairy cattle.....	14837	Crane-shovels, see Shovels.	
milk production by months, 1961-62.....	5748	Cranes (birds): hunting, possession, transportation, importation, Federal regulations, 1963-64.....	15535
number on farms, June 1963.....	16618	Crane, possession, transportation, importation, Federal regulations, 1963-64.....	15535
roughage fed—		Crane, derricks, etc., USSR cranes and derricks, study.....	14142
summer feeding season.....	1564	Cranium, see Skull.	
winter feeding season, 1962-63.....	16617	Crashes, see Aircraft accidents.	
milk—		Crater depth in fluid impacts.....	11516
concentrate rations fed, 1962—		Crater Lake National Park, general information.....	7329
3-stall milking plant, farm building plan.....	14879	Crater: mechanical properties of material, effects on cratering.....	7223
weight trends on mountain summer range.....	10222	Project Pre-Bugby chemical explosive experiments.....	16853
see also Dairy-herd-improvement associations.		Craters of the Moon National Monument, general information.....	12922
Cox, Kenneth A., nomination, hearings.....	6291	Crates, construction and packaging data, publications, list.....	12154
Coxsackie viruses, low temperature influence on resistance of infected mice.....	14911	Craven, C. J., our atomic world, story of nuclear energy.....	20335
Coypon, nutria in United States.....	4973	Crawford, Davis H., heat transfer in regions of separated and reattached flows.....	10980
CPSU, see Communist Party of Soviet Union.			
Crab Nebula, magnetic field of Nebula and its central star.....	1320		
Crab pots, Chesapeake Bay commercial, modification.....	13957		
Crabs, Pacific, application of radiation-pasteurization processes, annual report.....	18595		
see also Blue crabs.			

# JANUARY-DECEMBER

	Entry		Entry
Crawford, George W.:		Crime and criminals—Continued	
calibration of semiconductor detector pulse-height response to protons	11514	criminal justice act of 1963—	
radiation detectors, radiobiologic problems	16795	hearings	13815, 15322
Crawford Task Force on Federal Scientific and Technological Information Problems, scientific and technological communication in the Government	18275	reports	13762, 20472
Crayons and related art materials for school use	9709	criminological analysis of documents, USSR study	8914
Cream:		District of Columbia—	
dairy plants processing, layouts and operating criteria for automation	16746	legislation—	
fluid milk and cream monthly report	3713	hearings	11888
Creation (literary, artistic, etc.): training mind for creative process, USSR study	12650	report	15240
Creativeness, creative life for your children	4597	situation increasingly serious, hearing	6292
Creativity, <i>see</i> Creation (literary, artistic, etc.).		juvenile and young adult criminality, illegal narcotics traffic and effect, hearings	8123, 12024
Credit:		material evidence, photographic and physical methods for investigating, USSR study	5164
bank credit and money, 1962	6438	Mongolia, crime prevention	12461
department store	3596	offenses not committed in any district, place of indictment and trial—	
expansion relations between industry and State bank of Democratic Republic of Vietnam	2732	law	11719
housing, code of Federal regulations	6426	reports	6175, 9966
recent changes in liquidity	13937	PACAP basic bibliographies	13212
sales finance companies operations, monthly report	4167	publications, list	20086
savings and price and quality of (remarks)	10183	Soviet developments in criminology	5324
voluntary home mortgage credit program	19342	television violence and crime programs effects on young people, hearings	8122
<i>see also</i> Agricultural credit—Installment credit—Production credit associations — Retail credit.		print additional copies, reports—	12633, 13767
Credit insurance, export, and guarantee programs	14071	uniform crime reports, U.S., 1962—	15477
Credit Programs Committee, <i>see</i> Federal Credit Programs Committee.		uniform reporting, quarterly release	4254
Credit unions:		<i>see also</i> Criminal law—Prisons and prisoners.	
District of Columbia, repeal act, report	18898	Crimea, Russian SFSR, guidebook	15710
Government policy, report of Committee on Financial Institutions	10028	Criminal law:	
<i>see also</i> Federal credit unions.		Hungary, harsher political justice, spectrophotometer analysis, use in foreign criminal law, literature survey, USSR	14129
Creditors, claims, filing, amend bankruptcy act, reports	7024, 20593	tax violations, criminal aspects under U.S. laws	15666
Creep of metals:		Criminal procedure:	15635
nickel, creep-rupture—		District Courts, rules, proposed amendments	14812
controlled environments	11187	judiciary and judicial procedure, D.C. code of laws, revise, codify, enact, report	11838
oxide bonding effect	11163	Soviet developments in criminology—	5324
Crenshaw, Miss., railroad accident	12268	<i>see also</i> Indictments.	
Cressman, Earle R., nondetrital siliceous sediments	2351	Criminals, <i>see</i> Crime and criminals.	
Crest gates, <i>see</i> Gates.		Criminology, <i>see</i> Crime and criminals.	
Crested wheatgrass, <i>see</i> Wheatgrasses.		Cripples:	
Creveling, C. J., automatic data processing	21017	children, increase in services—	
Crevicular depth of 2d molar in impacted 3d molar surgery	82	law	20437
Crews, <i>see</i> Flight crews.		reports	15275, 17118, 19017
Crichlow, W. Q., quarterly radio noise data	9209, 12900	children, program trends in crippling conditions, 1950-60	1929
Crime and criminals:		Critical assemblies:	
application of cybernetics to criminology, East German translations	12412	Peach Bottom HTGR, activation measurements of Th-232 resonance captures	7689
crime prevention, role of expert criminology establishments, USSR	16259	reactor parameters measurements	11562
		Critical inclination problem in satellite orbit theory	7302
		Critical materials, <i>see</i> Strategic materials.	
		Critical point, choking 2-phase flow literature summary and idealized design solutions for hydrogen, nitrogen, oxygen, and refrigerants 12 and 11	18191
		Criticality, two-dimensional calculations of gaseous-core cylindrical-cavity reactors	7260
		Critiques, Christian, Jewish and Moslem scriptures, Soviet criticism	5424

# INDEX 1963

	Entry	Entry	Entry
Crittenden, Max D., jr., isostatic deformation of Lake Bonneville.	20736	Crosby, Robert L., indium effect on solid solubility of calcium and silicon in magnesium.	5496
Croatia, industry, ionization radiation, Yugoslavian study.	12635	Crosby, Sara J., directory of International Federation of Christian Trade Unions.	15657
Crocker, Laird, recovery of beryllium from Spor Mountain ore.	5499	Cross, J. L., reduction of data for piston gage pressure measurements.	12898
Croft, Cora D., fluctuations in railroad freight traffic compared with production, class 1 line-haul railroads, 1958-60 (base year 1947).	6633	Crossbreeding, <i>see</i> Hybridization.	
Croft, M. G., geology and groundwater resources of Bartow County, Ga.	19326	Crossley, Frank A., stress corrosion for structural alloys.	7601
Crokos, George, relief.	17235, 18822	Crowley County, Colo., water in Dakota and Purgatoire formations.	17532
Crompton quadrangle, R.I., bedrock geology.	19299	Crown glass, <i>see</i> Glass.	
Cronartium comandrae, <i>see</i> Comandra blister rust.		Crown weights in red pine plantations.	15566
La Cronica (periodical): labor problems in Peru (articles).	2828	Crownvetch, soil conserving legume and potential pasture and hay plant.	11436
Cronin, James G., geology and groundwater resources of Hale County, Tex.	6563	Crowther, Harold E., United States fishing industry and European Common Market.	8273
Crook, Charles B.: abstracts of material on soil and water conservation.	5791, 18396	CRPL, <i>see</i> Central Radio Propagation Laboratory.	
Index.	5790	CRREL, <i>see</i> Cold Regions Research and Engineering Laboratory.	
Crook County, Oreg., ground water in Prineville area.	8349	Crude oil, <i>see</i> Petroleum.	
Crook County, Wyo.: geology of Inyan Kara Mountain quadrangle.	8331	Cruelty to children, <i>see</i> Children.	
geology of Nefsky Divide quadrangle.	8330	Cruikshank, Stewart S., oxygen determination in fluorine-containing compounds.	18706
Crooked River project, Prineville Dam, design and construction.	13036	Crumlish, Brian J., reducing vulnerability of houses.	18716
Crop insurance, <i>see</i> Agricultural insurance.		Crushing machinery, new methods of crushing of rocks.	85
Crop lands, <i>see</i> Land.		Crustaceans, Theriosynoeum wyomingense, possible guide ostracode to Salt Wash Member of Morrison formation.	2344
Crops:		Crutcher, Harold L., climatology of upper air, etc.	11381
air pollution effects.	1418	Crutchfield, James, Pacific halibut fishery.	10190
crop production (periodical).	3571	Cruzin, antibiotic, mechanism of its action on cancer cells, USSR study.	19626
fallout from nuclear attack, effects, field and seed, production, farm use, etc., by States, 1961-62.	11333	Cryogenics:	
foreign crops and markets—periodical.	2305, 3721	carbon resistors for cryogenic liquid level measurement.	21030
world summaries, crops and livestock, monthly.	3722	heat transfer from solid surfaces to cryogenic fluids, literature survey.	9210
insecticide recommendations for 1963.	7557	materials data handbook supplement.	7617
Mississippi Delta area, production practices and costs, 1957-58.	352	performance of electrical-resistance strain gages at cryogenic temperatures.	7280
oilseed, research, Northern Regional Research Laboratory, publications, 1936-61, list.	5799	tensile and impact properties of structural materials at temperatures from 20 to 300° K.	14598
plantings, prospective, 1963.	9442	Cryolite:	
radiation effect.	10134	low-silica, recovery from siliceous fluoride offgases.	7222
reports, contents and release dates, 1963.	5746	minerals yearbook chapter.	19832
research, scientific careers.	1710	Crystal Dam and Reservoir, Curecanti unit, Colorado River storage project, economic justification.	11751
seed crops—acreage, yield, production, etc.	3368	Crystal is small but powerful, USSR.	5237
field seeds, acreage, yield, etc., crop years 1951-62.	3365	Crystalline rocks of Potomac River gorge near Washington, D.C.	19317
forecast.	4178	Crystallography:	
prices.	4179	aluminum crystallization during continuous casting, radioactive isotope study, USSR.	12462
stocks report.	4180	changes in irradiated borides.	14973
seeds, identification.	9561	crystal growth and boundary layer, Hungarian study.	19700
errata.	20277	crystallography and technology, USSR study.	7067
values, season average prices, value of production, 1961-62.	3364	electron theory of crystals, research.	7688
Virginia crops and livestock.	4279	glass crystal materials made from slag, USSR study.	655
weather and crop bulletin.	4302		
world summaries of statistics release dates, announcement.	2308		
<i>see also</i> names of crops.			
Crosby, David, forest insect conditions.	17471		
Crosby, Jesse J., vapor plating of aluminum on steel.	20298		
Crosby, John S., model II Michigan sand caster.	13987		

	Entry
<b>Crystallography—Continued</b>	
mechanical behavior of crystalline solids, symposium proceedings.....	9207
rare earth sulfides and actinide sulfides, USSR study.....	1061
supercooled clouds, recrystallization.....	20787
<i>see also</i> Crystals.	
<b>Crystals:</b>	
brittle fracture theory of initiation of cracks formed, USSR study.....	5419
growing and kinetics of formation, USSR study.....	8616
growth and boundary layer, Hungarian study.....	19700
growth and defect characterization research at NBS.....	9216, 19953
hydrogen overvoltage in single metallic crystals, research.....	11473
quartz, electronic-grade, minerals yearbook chapter.....	16329
semiconductor technology, USSR study.....	5237
silver chloride, delineation of tracks of heavy cosmic rays and nuclear processes.....	7255
slag, glass crystal materials made from slag, USSR study.....	655
structure, Fortran programs for analysis.....	18237
structure research, USSR study.....	5254, 5402
two-plate crystal light modulator.....	18169
<i>see also</i> Crystallography.	
<b>CSESS series.....</b>	<b>10025-26</b>
<b>Ctenopharyngodon, productivity, USSR study.....</b>	<b>16233</b>
<b>Cuba:</b>	
Castro-Communist subversion in Western Hemisphere—	
hearings.....	6194
reports.....	7956
Castro regime.....	11293
economic and sociological advances of revolution.....	2529
economy, creation of state sector, USSR study.....	713
education in revolutionary regime, Bulgarian study.....	2626
educational data.....	13848
embassies abroad, aid in infiltrating spies among workers.....	720
export-import affairs.....	649
finances under Castro government.....	2891
foreign travel restrictions, violation, hearing.....	18953
gazetteer, official standard names.....	19289
information.....	2569
Japanese Socialist committee protest U.S. policy.....	2688
livestock raising.....	724
military buildup, report.....	13792
miscellaneous information.....	2605
missile bases, President Kennedy's report to the people on protecting the peace (address).....	1577
pro-Castro forces, attempts to pervert American press, testimony of Carlos Todd, hearings.....	4784
shrimp conservation, convention, text, report.....	20529
situation (extract of statement).....	1577
Socialist, public health.....	2627
Soviet military buildup, U.S. charges.....	1513
subversion base in America, study.....	6302
sugar, loose storage and transportation.....	2892
trade and payments agreement with Mall.....	2864

<b>Cuba—Continued</b>	<b>Entry</b>
translations.....	2957,
2996, 5251, 5289, 5315, 5361,	
6690, 6718A, 6805, 6930, 6954,	
7030, 7126, 8441, 8503, 8521,	
8591, 8617, 8650, 8747, 8878,	
8916, 8946, 8999, 10459, 10478,	
10486, 10500, 10505, 10513,	
10541, 10556, 10603, 10622,	
10638, 10682, 10729, 10749,	
10750, 10812, 10844, 10871,	
12289, 12379-380, 12467, 12535,	
12561, 12590, 12632, 12751,	
12766, 14126, 14136, 14177,	
14218, 14230, 14295, 15067,	
15677, 15777, 15976, 15985,	
16080, 16170, 16181, 16236,	
16250, 17641, 17694, 17715,	
17796, 17866, 17927, 17958,	
17996, 19476, 19535, 19611,	
19709, 20776, 20900.	
United Nations Special Fund, hearing.....	6297
United States-Cuban relations, events, 1957-63.....	8106
Cuba, Fair Play Committee, <i>see</i> Fair Play for Cuba Committee.	
Cuba, Medical Aid to, Committee, <i>see</i> Medical aid to Cuba Committee.	
<b>Cubans:</b>	
refugee children, care away from home.....	6013
refugee problems, hearings.....	4786, 19063
refugees, U.S. policy concerning.....	16820
Cabbage, James M., Jr., effect of multiple-jet exits on base pressures of wing-body combination, etc.....	5555
Cubbison, Robert W., asymmetric pen-shape nozzles in jet-canard configurations for attitude control.....	19906
Cucumbers, for pickles, acreage, yield, production, etc., 1951-60.....	45
Cuddeback Lake Air Force Range: public lands, withdrawal and reservation for use of Air Force Dept.—	
law.....	13420
reports.....	7940, 12000
Cullom, Richard R., experimental investigation of 90° flat-plate magnetic triode for direct energy conversion.....	1309
<b>Culture:</b>	
Bulgarian-Rumanian scientific and cultural cooperation agreement.....	10656
cultural relations agreement with—Iraq.....	20179
Rumania.....	13085
educational and cultural exchange programs of State Department—	
American grantees, 1962, list.....	16572
reports.....	1514, 18327
special report on American studies abroad.....	15186
special study of effectiveness, report.....	9836
exchange-of-persons program, report.....	18375
influence on children, research programs, studies in progress.....	176, 11647
International exchange-of-persons program.....	14709
International information and cultural series.....	1514, 14709, 18327
International meetings, world list.....	4315

# INDEX 1963

Entry	Entry
Culture—Continued	Current retail trade reports..... 13301
Latin America, aboriginal develop- ment..... 14695	Currents, <i>see</i> Air—Electric currents— Ocean currents.
materials, importation agreement— report..... 20536	Curriculum:
text..... 20514	classing guides and related publica- tions..... 8171
North Vietnam, opinion on work..... 15999	colleges and universities, under- graduate, flexibility, new di- mensions..... 6336
USSR, preventing inefficient ex- penditures..... 12425	electronic data processing, post high school..... 6332
Uzbekistan in 5th year of 7-year plan..... 12702	export trade education program, planning, etc., guide..... 15436
<i>see also</i> Education.	manpower development and train- ing program—
Culture media, <i>see</i> Bacteria and bac- teriology.	clerical and record keeping occu- pations..... 2161
Culverts, gully control structures in Wisconsin..... 7541	stenographic-secretarial occupa- tions..... 2162
Cumberland Gap National Historical Park, general information..... 11118	mechanical technology, 2 year post high school programs in me- chanical design and produc- tion..... 2163
Cumberland overthrust block, forma- tions of central part..... 6551	science courses, written materials, films, studies supported by Na- tional Science Foundation..... 1361
Cumberland River and Valley, Big South Fork, dam and reservoir construction, hearings..... 13667	short-term training courses under professional nurse traineeship program of PHS..... 5695
Cummings, W. V.:	vocational education programs, techniques for determining courses of study..... 6346
examination of 304 stainless steel cladding from cold-swaged and rolled fuel rods..... 7695	<i>see also</i> Core program.
radiation effects in borides, crystal- lographic changes..... 14973	Curtains, defective canvas end cur- tains for cargo trucks, procure- ment by Army, GAO review..... 10268
Cummins, Robert, Jr., snapper trawl- ing explorations along south- eastern coast of U.S..... 8272	Curtis, Marjorie, relief..... 20463
Cunniff, P. F., graphical-numerical method for transient response of nonlinear systems..... 3228	Curtis, Willie R.:
Cunningham, Francis S., use of price indexes in escalator contracts..... 19803	device for automatically starting recording rain gage when rain- fall begins..... 6510
Cunningham, Fred G.:	flow characteristics of 2 types of springs in southwestern Wis- consin..... 6508
earth reflected solar radiation inci- dent upon arbitrarily oriented spinning flat-plate..... 14569	Curves of ground proximity loss for dipole antennas..... 11101
earth reflected solar radiation inci- dent upon spherical satellites, etc..... 9147	Cushing, E. M., water resources and Mississippi embayment project..... 12226
power input to small flat plate from diffusely radiating sphere with application to earth satellites..... 5580	Custer County, S. Dak.:
Cunningham, Jon, economic time se- ries, spectral analysis..... 16910	Beecher no. 3-Black Diamond peg- matite, diamond-drilling ex- ploration..... 14019
Cuppels, Norman P., geology of Clifton quadrangle, Wyo.-S. Dak..... 20727	beryllium exploration..... 15608
Curative sleep, USSR..... 7074	Burdock quadrangle, geology..... 10275
Curculionidae, <i>see</i> Weevils.	geology of Calamity Peak area..... 5018
Curl, Peter V., American foreign pol- icy, current documents, 1959..... 14702	Custis-Lee Mansion, Robert E. Lee Memorial, general information..... 1348
Curle, Lawrence D., soil survey report, Yadkin County, N.C..... 1506	Customs, <i>see</i> Tariff.
Curley, Thomas J., copper industry re- port, annual, 1963..... 11597	Customs Court:
Curlin, J. W., response of hardwood seedlings to inorganic fertil- izer..... 7471	cases adjudged—
Currency, <i>see</i> Money.	Customs Court reports..... 8133, 15406
Current challenges to farmer coopera- tives..... 10101	Treasury decisions..... 4245
Current discharge at selected stations in Pacific Northwest..... 4212	Customs districts, code classification, schedule D..... 11641
Current export bulletin..... 3573	Cutler Drain, Fla.:
Current fishery statistics, C.F.S. series..... 541-544,	Central and Southern Florida proj- ect, engineer report—
2285, 4935-49, 6449-50, 8264- 69, 10185-188, 12130-135, 13946-951, 15515-517, 17444- 445, 19222-224, 20683-686.	departmental edition..... 407
Current industrial reports..... 158-159,	document edition..... 318
1888-95, 3574-75, 4578-84, 5994-97, 7750-60, 9714-23, 11615-630, 13287-298, 15057- 70, 16890-899, 18679-686, 20350-358.	Cutthroat trout, <i>see</i> Trout.
Current projects on economic and so- cial implications of science and technology..... 9250	Cutting, Windsor C., guide to drug hazards in aviation medicine..... 13253
	Cutting tools:
	metal, shipments, 1959-62..... 9706
	metal, value of shipments, 1947-61, current industrial reports..... 159
	titanium-boride base alloys, cutting properties, USSR study..... 737
	Cuttings, <i>see</i> Reproduction.
	Cutts, Warren G., phonics in begin- ning reading..... 12071
	Cuyahoga County, Ohio, relief, report..... 13582



	Entry		Entry
Cuyuna Range:		Cybernetics—Continued	
anionic flotation of silica from		philosophical problems conference,	
goethite iron-bearing materials	9128	USSR	6666, 6843
geology and ore deposits of North		planning and production manage-	
range	20734	ment, USSR study	15733
Cuzco, Peru, uranium reconnaissance.	11581	powerful factor in scientific tech-	
Cybernetics:		nical progress, USSR report	2879
and automatic control, USSR		problems, USSR studies	2847,
studies	3006, 6968,		17732, 19750
application of certain propositions	14269	recognition of patterns by correla-	
to power system control prob-		tion method, USSR study	5274
lems, USSR study	17777	reflection and information concepts,	
application to—		USSR study	10777
criminology and jurisprudence,		relationship to new lines in develop-	
East German translations	12412	ment of physiology, USSR	
social sciences, USSR study	10485	study	2918
teaching research, East German		relay devices and finite automata,	
study	8908	symposium, USSR	12573
approach to educational theory,		research at Institute for Machines	
USSR study	6965	and Automation of Slovak	
aspects of statistics, East German		Academy of Sciences, Czecho-	
study	8938	slovakia	6969
automata, life, and consciousness,		Rumanian book review	8585
USSR study	12321	scientific conference on learning	
biological and technical aspects,		automatic machines and infor-	
Rumanian study	20897	mation processing in orga-	
biological aspects—		nisms, West Germany	7071
session of USSR Academy of		scientific-technical progress, East	
Sciences, Dept. of Biological		German report	8929
Sciences	2565	self-learning systems, principles of	
USSR studies	1133,	design, USSR study	8540
biology and medicine, USSR study	12727	significance in science, technology	
brain is its own type of computer,	2945	and economy in German Demo-	
USSR study	6761	cratic Republic	5343, 7085,
communications theory and school,		Soviet military translations	10506
USSR study	2917	standpoint on automatism in living	10418
comparative analysis of psychic		nature and plant humidity,	
control and regulation in au-		USSR study	7020
tomata, USSR study	10801	technical, USSR, news	19402
control of economy, USSR study	17627	thought and cybernetics, USSR	
control systems theory, USSR		study	8661
studies	773, 836, 8486	Ukrainian developments, transla-	
cybernetics and interrelationship		tions	2703
of sciences, USSR study	12463	uses in road construction, prospects,	
cybernetics and pedagogy, USSR		USSR study	2759
study	2550	USSR studies	5239, 14099, 16120,
cybernetics and planning, USSR		technical aspects	15688
study	5344	what does it really mean?	8928
cybernetics inside man	828	see also Neurocybernetics.	
diagnosis of disease, use in devel-		Cybulski, Ronald J., experimental	
opment, USSR study	19726	performance of ion rocket en-	
economics, USSR study	14205	gine using rectangular-slab	
education and automation, East		porous-tungsten emitter	1272
German study	10533	Cyclic intermediates industry, outlook	
education, USSR study	14346	for 1963 and review of 1962	5965
engineering, USSR study	2894	Cyclone coal washer, performance of	
hereditary information, analysis of		screw-type classifier-cyclone	
structure, USSR study	19390	combination on sizes of coal	1247
human information processing, some		Cyclone processes, see Metallurgy.	
peculiarities, USSR study	6876	Cyclones, see Hurricanes.	
machines, prospects and possibili-		Cylinder glass, see Glass.	
ties in perfecting, USSR study	8437	Cylinder pressmen, see Pressmen.	
mathematical linguistics, Rumanian		Cylinders:	
study	10762	blunt—	
mathematics, principles of learning		cone-cylinder body with flared	
and logical processes in auto-		afterbodies, transonic static	
matic equipment, East German		aerodynamic characteristics	10994
study	10835	pressure distributions in air at	
methods, using in law, USSR study	5148	hypersonic speeds	20991
military applications, East German		flares at zero angle of attack,	
study	15977	laminar boundary layer separa-	
modeling of thought processes,		tion results	9109
USSR study	10574	flat-faced, aerodynamic heating	
natural, the artificial and cybernet-		data	14534
ics, USSR study	14112	heat transfer and pressure measure-	
nature of thinking and problem of		ments on flat-face cylinder at	
modeling it, USSR study	16035	Mach number range of 2.49 to	
nervous system, USSR study	16263	4.44	5554
occurring in municipal transporta-		pressurized, correlation of buckling	
tion, East German study	8955	strength in compression or	
philosophical aspects of information		bending with structural pa-	
theory, USSR study	16098	rameters, errata	5567

# INDEX 1963

	Entry
Cylinders—Continued	
ring-stiffened, buckling under pure bending moment and nonuniform temperature distribution	1305
thin-walled pressurized, vibration characteristics of circular type, NASA report	19946
torques induced by magnetic field	5613
wall pressure fluctuations in turbulent pipe flow, etc.	11263
Cylindrical reactors, <i>see</i> Reactors (atomic).	
Cyprus:	
administrative changes based on municipalities law	6857
agricultural commodities, agreement	16604
economy, basic data	6598
income tax act of 1961, foreign persons	846
investment guaranties, agreement	16586
labor, etc.	14461
laws, translations	5143
newly independent nation, fact sheet	9400
Peace Corps program, agreement	1535
visas, nonimmigrant, waiver of fingerprinting requirements, agreement	9423
Cysteinamine, protective action on radiolimitic effect caused by oleic acid oxidation products, USSR study	16151
Cystine, electron parametric spectra arising after mechanical and thermal processing of natural cystine-containing polymers, USSR study	19587
Cysts, pulmonary, development precipitated by decompression	9104
Cytochemistry:	
anoxic and anoxic-ischemic encephalopathy in rats	7195
blood glycogen in mammals after single whole-body X-irradiation, USSR study	8838
cytochemical study of neuronal Golgi apparatus in experimental diptheritis encephalitis in rats	7193
frog oocytes, quantitative data, USSR study	17922
nucleic acid content in nerve cells in various functional states, data from quantitative investigations, USSR study	17810
Cytochromes, rat tissue cytochrome c levels, alterations by chronic cold exposure	18480
Cytogenetic study of some radium dial-painters and their progeny	18214
Cytology:	
luminescence methods, USSR study	19659
USSR Institute of Cytology, conference reports, abstracts	17576
Cytology (USSR periodical): translations	10792
Cytomorphosis, index of brain neuron excitation, USSR study	6800
Czechoslovakia:	
agriculture, survey	2132
biology and medicine, activities	7008
closing of New China News Agency office, Chinese protests	19443
Dutch visitor's impression	5140
East European legal journals, abstracts	7076
economic-technical information	7058
economy, basic data	6586
education	10067
gravimetry work	8625
Janos Ladik's study tour	17651

	Entry
Czechoslovakia—Continued	
legal journals, abstracts	980
1102, 1121, 2554, 8891, 10702, 12556, 14337, 16088	
physical scientists, biographic data	17592
powder metallurgy, developments	15925
provincial press, summaries	354
747, 851, 968, 1089, 2511, 2649, 2670, 2815, 2906, 5120, 5178, 5272, 6658, 6726, 6878, 6951-52, 6969, 6976, 8507, 8656, 8772, 8934, 10395, 10483, 10548, 10760, 10879, 12395, 12397, 12517, 12627, 12709, 12735, 14249, 14376, 15699, 15808, 15833, 15926, 16004, 16100, 16213, 17687, 17878, 17967, 19427, 19493, 19514, 19649, 19745, 20829	
radioactivity measurement at water works laboratories compared with foreign measurement technology	8750
retail trade, restrictions on purchase of goods by nonmarket consumers	1078
scientists, information	17659
sheet glass, determination of no injury or likelihood thereof to U.S. industry	1568
Slovak theatre, discussion concerning	784
Socialist Slovakia, development (speech)	2536
state and economic institutions	12320
visas, issuance of re-entry visas to diplomatic personnel, agreement	9416
writers conference, Apr. 22, 1963	14202

## D

D.H.I.A., <i>see</i> Dairy herd improvement associations.	
D.S.A., <i>see</i> Defense Supply Agency.	
Daane, J. Dewey, remarks, May 27, 1963	13105
Dade County, Fla.:	
south, central and southern Florida project, engineer report—	
departmental edition	2184
document edition	2072
Dahl, W. D., alpha rhythm feedback control unit	11180
Dahms, Walter G.:	
dispersal of lodgepole pine seed into clear-cut patches	19254
silvical characteristics of mountain hemlock	12160
Dahomey:	
import tariff system	2393
investment law	17554
Dairy and Poultry Market News Service, what it is, what it does, etc.	4
Dairy cattle, <i>see</i> Cattle—Cows.	
Dairy farms, <i>see</i> Dairying.	
Dairy herd improvement associations:	
national cooperative program—	
dairy-herd-improvement letter (periodical)	3583
handbook for extension workers	18416
sire summary lists	1637, 18402
4340, 9543,	
supervisor's manual	20
Dairy industry, <i>see</i> Dairying.	
Dairy plants, <i>see</i> Dairying.	
Dairy products:	
manufactured products, 1962	16620
market information and prices, explanation of Dairy and Poultry Market News Service	4
market statistics, 1962	5845

# JANUARY-DECEMBER

	Entry		Entry
Dairy products—Continued		Dallavalle, Q. Francis, farm mortgage debt and farm taxes	1901
new programs, to achieve balance between production and demand, message from the President	4721	The Dalles Dam, fish passage report, 1961	396
price supports, reduce Govt. expenditures, hearings, 9993, 11869, 12004	12004	Dalrymple, Paul C., South Pole micro-meteorology program	1435
prospects for foreign trade	8289	Damages, <i>see</i> Claims.	
statistical summary, 1962	7462	D'Amico, Kathleen J., statistical summary of mineral production	1256, 20973
use and promotion in public eating places	18433	D'Amico, Louis A.: higher education, basic student charges, 1962-63	19101
<i>see also</i> names of products.		provision of food services to students in colleges and universities, 1961-62	13855
Dairying:		Damon, Samuel R., collection, etc., of diagnostic specimens	9337
cooperatives, impact on Federal order milk markets	15462	Damping:	
dairy-herd-improvement letter, national cooperative improvement program	3583	aerodynamic—	
dairy plants surveyed and approved, inspection and grading of manufactured or processed products, regulations, list	14822	moments of cones with different centers of rotation	7292A
dairy program to increase income of dairy farmer (address)	1672	Saturn SA-1 model vibrating in 1st free-free bending mode	19926
dairy situation (periodical)	3584	angular motions of spinning space vehicles with use of inertia sphere	1324
five-year projections, 1962-67	2151	Liquids, oscillations in spherical tanks, effectiveness of positive-expulsion bags and diaphragms	12860
foreign agriculture circulars	3720	longitudinal electron oscillations in thermal plasmas	12567
legislation, hearings	11869	material, scaling laws	3132
milk protection after nuclear attack	10138	Damping of vibration, <i>see</i> Vibration.	
national cooperative dairy herd improvement program, handbook for extension workers	18416	Dams:	
pasture season, 1962	1563	permits for work in navigable waters	4867
plants processing milk and half-and-half, layouts and operating criteria for automation	7572, 16746	U.S.S.R., large dams	17191
publications, price list	5681	print as Senate document, report	13765
small business problems, report	2039	<i>see also</i> names of dams or bodies of water.	
sweeteners used by dairy industry	10048	Dana Point, Calif.: harbor, engineer report—	
Dakota, Lake, geology and ground water resources of Lake Dakota plain area, South Dakota	8342	departmental edition	2194
Dalap Island, occupancy, compensation, Court of Claims to adjudicate claims, report	9861	document edition	1985
Dale, Laura H., State anti-injunction laws, major provisions, discussion	9036	Danger areas, Pacific danger areas, DAFAC	21051
Dale, Martin E., Interplant alder to increase growth in strip-mine plantations	20696	Dangerous articles, <i>see</i> Hazardous substances.	
Dales, Sophie R.: benefits and beneficiaries under public employee retirement systems, 1962	11287	Danielian, Vagharshag H., relief	9850, 16995, 17215
Federal unemployment tax receipts and Federal allocations to States for employment security administration, 1960-61 and 1961-62	3329	Daniells in India	3327
Dalgarno, A.: atomic polarizabilities and shielding factors	18120	Daniels, Draper: remarks—	
electron and ion temperatures in ionosphere	18122	Mar. 7, 1963	6054
Dallas, Tex.: census of housing 1960, standard metropolitan statistical area, components of inventory change	7769	Apr. 24, 1963	9786
consumer expenditures and income, 1960—		Dannenberg, Robert E., helium film cooling on hemisphere at Mach no. of 10	1311
advance report	10892	Dannenberg, R. O.: beryl-spodumene concentrates containing 10 to 30 percent beryl, treating by fluosilicate process	5480
supplement	14457	recovery of beryllium from Utah ore by fluosilicate process	5483
electric facilities of area, maps	521, 2266	Dannett, Sylvia G. L., our women of the sixties	11669
income, education, and unemployment in neighborhoods	7173	Dansby, William L.: occupational wage surveys—	
occupational wage survey—		Birmingham, Ala.	12802
departmental edition	7162	Charlotte, N.C.	14465
document edition	6073	Greenville, S.C.	16279
		Jacksonville, Fla.	10902
		Lubbock, Tex.	16283
		Norfolk-Portsmouth and Newport News-Hampton, Va.	16286
		Richmond, Va.	5446
		Savannah, Ga.	14467
		Daoust, Charles F., automatic vending machine industry, its growth and development	1856

Do not order from index; see indicated entry

Page 199

# INDEX 1963

Entry	Entry
DAPAC messages, danger areas in Pacific	21051
Dare County, N.C., Navy-Air Force range, acquisition, hearings	9999
Darkfield microscopy for detection and identification of <i>Treponeema pallidum</i>	5683
Darling, Richard L.: elementary school libraries, selected bibliography	4814
school library supervision in State and local school systems	4823
Darrow, George M., strawberry culture	1690
Darwin quadrangle, Inyo County, Calif., geology and ore deposits	2347
Data, see subjects.	
Data acquisition from spacecraft	5544
Data processing, see Electronic data processing systems.	
Data storage and retrieval systems, see Information storage and retrieval systems.	
Dates (fruit): production, use value, 1961-62	18340
Daugherty, Jack W., chlorinated hydrocarbons, effects on substrate-linked phosphorylation	16866
Daughters of American Revolution, National Society of, see National Society of Daughters of American Revolution.	
Daughters of the Confederacy, United, see United Daughters of the Confederacy.	
Dauman, Alexander, economic developments in Switzerland, 1962	8398
Davenport, Monty E., effect of transverse temperature gradients on heat transfer and friction for laminar flow of gases	15011
Davenport, Paul B., orientation, etc., of orbiting astronomical observatory	5604
Davenport, Iowa: occupational wage survey—departmental edition	5445
document edition	4701
Davens, Edward, report of task force on prevention, etc., President's Panel on Mental Retardation	18273
Davidson, D. F., selenium in uranium deposits	6552
Davidson, Donald R., impact of dairy cooperatives on Federal order milk markets	15462
Davidson, John R., environmental problems of space flight structures, etc.	3137
Davidson, M. T., design of hardened structures	11487
Davidson, Walter B., relief	20462
Davis, C. S., Jr., universal helicopter transmission test stand	7481, 16631
Davis, Chester P., Jr., farmhouse design and equipment for summer comfort	9563
Davis, Dan A., ground-water reconnaissance of American Samoa	17530
Davis, Densie A., HU-1/SS/11/AN/ASW-12 weapons system flight evaluation	14903
Davis, Don D., buffet tests of attack-airplane model	5534
Davis, Harry E., digest of 50 selected pension plans for salaried employees, spring 1963	20929
Davis, James W., polar material in distillate fuel	10860
Davis, Jesse L., joint apprenticeship committees and training in new processes for compositors, etc.	5901
Davis, L. E.: mineral industry of—California	3060
Nevada	1217
Davis, L. R., rocket observations of solar protons	21014
Davis, Paul L., rind breakdown of citrus fruits, factors affecting	7576
Davis, R. L., feedlot and ranch equipment for beef cattle	1691
Davis, Robert E., geology and uranium deposits of Strawberry Hill quadrangle, Wyo.	2340
Davis, Robert T., water supply outlook and Federal-State-private cooperative snow surveys for Washington	4291
Davis, Rogers F., mobile diesel powered equipment for noncoal mines approved by Bureau of Mines, 1951-62	18074
Davis, Theodore F., shipping and storage of radioactive materials	18588
Davis-Bacon act, see Government contracts.	
Davis Dam: general information	5705
geological reconnaissance between Lake Mead and Davis Dam	15610
Davis Dam powerplant, general information	5705
Davis Strait, sailing directions, change	11138
Davison, Richard A., ventilation of middle ear	4409
Dawe, Clyde J., organ culture symposium, etc.	9225
Dawsey, J. V., Jr., flood-control tunnel 10, Fort Randall Dam	13866
Dawson, John, plasma instabilities in one-dimensional plasma	7701
Day, C. Godfrey, oceanographic observations, 1960, east coast of U.S.	13972
Day, J. Edward, address, Feb. 25, 1963	5670
Day, James V.: remarks—Apr. 18, 1963	8237
May 21, 1963	10159
May 22, 1963	10160
Day, John, Waterfowl Management Area, see John Day Waterfowl Management Area.	
Day, Richard H.: approach to production response—estimating nonlinear functions with emphasis on agricultural data	2130
Day care of children: migratory farm workers', assist—hearings	10021
report	11968
nursery school, criteria, etc., for a good one	20646
Days, see names of special days.	
Dayton, Ohio: consumer expenditures and income, 1961	19788-789
Municipal Airport, weather observations, hourly, decennial census	21171
occupational wage survey—departmental edition	10899
document edition	9820
Daytona Beach, Fla., retirement income of the aging, hearings	325
DCA, see Defense Communications Agency.	
DCTA, see Acetic acid.	
Dead, Federal employees dying in Alaska and Hawaii, transportation of remains, etc., report	17282

# JANUARY-DECEMBER

	Entry
Deadband, about desired perigee, effect on guidance of space vehicle approaching earth.....	5597
Deaf:	
hard of hearing child, services needed, program development guide.....	16917
service-connected disability of deafness in both ears, additional compensation to veterans.....	11712
law.....	4730, 11947
reports.....	14918
speech discrimination of hearing-impaired individuals in noise, relationship to other audiometric parameters.....	10082
teachers, specially trained.....	
Deaf, Convention of American Instructors of, see Convention of American Instructors of Deaf.	
Dealers:	
automobiles in District of Columbia, administration and enforcement of regulations, report.....	2037
household appliances, control methods.....	1452
livestock, how packers and stockyards act applies.....	13141
subject to certain sections of title 1, National housing act, list.....	8232
turkeys, national improvement plan, participants.....	4339, 11438
Dean, Arthur H., statement on disarmament made in committee 1 of United Nations, Nov. 6, 1962.....	1796
Dean, Gerald W., supply functions for cotton in Imperial Valley, Calif.....	8155
Dean, John W., tabulation of thermodynamic properties of normal hydrogen.....	1331
Deans, Edwina:	
elementary school mathematics—library, selected bibliography of recent titles.....	358
new directions.....	17370
Death:	
clinical, caused by mechanical asphyxia, restoration of vital functions, USSR study.....	2960
infants, United States, each State, morbidity and mortality weekly report.....	13031
mortality analysis and summary statistics, 1960.....	3931
mortality, among men 20-64 years of age—	
by industry and cause of death.....	13029
occupation and cause of death.....	20114
occupation level and cause of death.....	20113
mortality statistics, chronic pulmonary insufficiency.....	20115
statistics.....	3280
statistics.....	14677, 20094, 21094
Death camas, livestock poisoning in Western States, reducing losses.....	14856
Death gratuities, see Gratuities.	
Deaver, George G., step into action, guidebook for above-knee amputee.....	9356
Debate, limitation of, see Cloture.	
Debates and debating:	
Senate debates, germaneness—	
hearings.....	17334
report.....	17299
Debits, see Banks and banking.	
DeBlois, Eleanor N., U.S. agricultural exports under Government-financed programs.....	6319
DeBoer, Lloyd M.:	
marketing research procedures.....	11274
national directories for use in marketing.....	14687

	Entry
Debrecen, Hungary, 9th congress of Hungarian physicists, meeting, 1962.....	8923
Debt:	
farm mortgage debt by States, 1950-62.....	12052
home mortgages and financing activity.....	3629
long-term, State and local governments.....	154
see also Agricultural credit—Public debt.	
Decane oxidizing bacteria isolated from depth waters of northern Cascaucasus, USSR study.....	17700
Decarbonation, P-T univariant equilibria of reaction forsterite + calcite = monticellite + periclase + CO <sub>2</sub> , experimental studies on Bowen's decarbonation series, II.....	16385
DeCarlo, J. A., coke and coal chemicals.....	20942
Decay (radioactive):	
radioactive decay curves, Fortran II program for analysis, errata.....	7246
Decay (timber):	
associated with Fomes ignarius sporophores in Colorado aspen.....	17490
Deceleration, peak, effects on range sensitivity for modulated lift reentry at supercircular speeds.....	18154
Decelerators:	
inflatable, towed, aerodynamic drag and stability at supersonic speeds.....	9157
use of towed spheres, conical rings and cones as models at Mach nos. 1.57 to 4.65, aerodynamic characteristics.....	11065
Decerebration, see Brain.	
Decimal classification, see Classification.	
Decision-making:	
judgment analysis, technique for analyzing group judgment.....	9622
tactical, action selection as function of track load, etc.....	11507
Decisions, see names of courts, etc., rendering decisions—also subjects.	
Declaration of Independence:	
observe anniversary by ringing bells, reports.....	11978, 13577
text.....	9953
Decoder, digit-to-angle converter with intermediate conversion, USSR study.....	20845
Decomposition:	
cellulose-decomposing myxobacteria, species and varieties, description, USSR study.....	12493
thermal, linear perfluoroalkanes.....	14552
Decompression, prolonged exposure of animals to pressurized normal and synthetic atmospheres.....	9101
Decompression sickness, see Aeroembolism.	
Decontamination:	
civil aircraft exposed to radioactive fallout.....	562
Federal civil defense guide.....	20375
DeCook, Kenneth J., geology and ground-water resources of Hays County, Tex.....	14030
Decorating, wood brick strip paneling, new product for walls, etc.....	17477
Decorations of honor, Armed Forces decorations and awards (poster).....	18538
Decortication, see Brain.	



# INDEX 1963

	Entry		Entry
Deductibility of accrued vacation pay:		Defense Department—Continued	
law	20434	electronic data processing equipment use, hearings	15329, 17182
reports	11851, 17286	Federal manual for supply cataloging, format and content, Jan. 1963	10034
Deeds, deeds of trust, appointment of new trustees by agreement of parties, report	6154	freight description guide	19075
Deep Creek Mine, methods and costs	14500	Government information plans and policies, hearings	13650, 17169
Deep plowing of sandy soil	1720	handbook DSAH series	2114, 19075
Deep-sea fishes, USSR	8792	handbook H series	10039
Deer:		history, organization, etc.	95
browse plants of southern forests	4950	illegal use of operations and maintenance funds for rehabilitation and construction of family housing, etc., GAO report	17508
browsing on ponderosa pine seedlings, effectiveness of repellents	19256	ineffective utilization of supply items resulting from deficiencies in Federal catalog system, GAO review	12204
metabolism of phosphorus and iodine	18562	manned aircraft nuclear propulsion program, GAO review	6534
use of Arizona pine forest, effect of logging	4987	manual DSAM series	13833, 15408, 17345
use of natural openings in Arizona pine forest	4986	Military Affiliate Radio System (MARS), general information	13835
Deer Flat area, Utah, geology, ore deposits, and exploratory drilling	12223	military budget local currency support program for Korea, GAO review	2327
Deering, Elmer C., bond sales for public school purposes	4807, 20630	military construction authorization, 1964—	
Dees, Lola T.:		hearings	11880, 19043
index of fishery biological papers by Fish and Wildlife Service authors, etc.	19226	reports	11809, 11818, 19032, 20490
list of Special scientific reports and Special scientific report, fisheries, of Fish and Wildlife Service	8276	military handbooks	344-346, 4797, 12037-38, 19080, 20617
Defenders, see Public defender.		military pay and allowances, causes of overpayment, GAO review	8313
Defense, see Civilian defense—Installations (military)—National defense.		military procurement, relation of cost data, hearing	11886
Defense agencies, see Government offices.		military standards	2115-17, 10042-43, 17348-350, 19081-83, 20618-623.
Defense communications, see Military communications.		noncombat vehicles maintenance costs and manpower, GAO review	589
Defense Communications Agency, DCA circulars	17340-341	organization and functions, brief	8135-36
Defense contracts, see Government contracts.		petroleum storage—	
Defense Department:		in commercial facility, Plattsburg, N.Y., unnecessary expenditures, GAO report	14011
air accommodations, use of 1st-class, GAO report	17506	in new commercial facilities, examination of costs to Government under negotiated contracts, GAO review	6532
appropriations, 1963, proposed provision	8022	procurement and supply, background material, on economic aspects	7829
appropriations, 1964—		procurement impact on economy, hearings	11731
hearings	7980, 9922, 11873, 17303	programming system	4798
law	20432	regulations DSAR series	10036-37, 17346
military procurement—		rehabilitating equipment donated under military assistance program, excessive costs, GAO report	12202
hearings	6187, 8092	report, 1962	10038
law	11720	selling to military, general information	19086
reports	6142, 6161, 8073, 9902	small business specialists, list	10045
reports	13563, 18886, 19009	sole source procurement, hearings	6191
architect-engineer contracts, how to obtain consideration	6313	specifications and standards, index	19079
budget, 1964, amendment	11763	notice	8140
cataloging and standardization program, semiannual reports	18927-928	supplement	3779
cataloging handbook H series	3650-3660, 3674-78, 4794, 15407, 17347, 19074	standardization documents, supply classification listing	19078
cataloging manual M (series)	8137-38, 10034	standardization manual M (series)	10035, 20616
civilian travel and transportation regulations	20305	standardization policies, procedures, etc., manual	10035, 20616
contractors, relocation costs incurred for recruiting salaried personnel, etc., GAO review	6537	stock funds and related consumer funds, GAO review	2334
contracts with Martin Marietta Corporation, analog computer systems, excessive cost to Government, GAO report	19280	surplus personal property, how to buy	10040
cost reduction program, report 1963	17347		
electric lamps, supply management, GAO review	8323		

Entry	Entry
Defense Department—Continued	Dehydration, thermal and vibration
technical manuals, military/industry specification standardization program..... 8139	disease, USSR translations..... 8935
TFX contract investigation, hearings..... 10015, 19056	Dehydrofrozen apple slices, their potential in selected markets..... 4361
12019, 13809, 15386, 19056	Dekon, Indonesian economic declaration and conditions for its implementation (lecture)..... 14235
unjustified cost-of-living allowances paid in Alaskan Command to military personnel not accompanied by dependents, GAO report..... 15598	De Laguna, Wallace, geology of Brookhaven National Laboratory and vicinity..... 14018
Defense Lending Office, audit report, 1962..... 2320, 7844	deLaittre, John: addresses, etc.— Nov. 28, 1962..... 493 Nov. 4, 1963..... 20667
Defense production act, <i>see</i> Production.	Delaware: annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics..... 4568 climatological data..... 3517 convey lands of Fort Miles Military Reservation by quitclaim deed to, hearing..... 18922 costs of operating exempt for-hire motor carriers of agricultural commodities, pilot study..... 8152 county business patterns, activities covered by OASDI program..... 15051 minerals industry, minerals year-book chapter..... 18080 population, 1960, characteristics..... 15039 precipitation data, hourly..... 3771 redevelopment area 5B, statistical profile..... 13377 weather stations, decadal census..... 10673 ZIP code directory..... 20032
Defense Production Joint Committee, report..... 4766	Delaware (fishing vessel): trawling off New England coast, 1961, progress report on studies..... 8270
Defense scrap yard handbook..... 2114	Delaware & Hudson RR., accident..... 639
Defense Supply Agency: civilian career— program for quality control and inspection..... 15408 trainee program..... 13833 civilian personnel qualifications inventory and referral system..... 17345 general information..... 10041 handbook DSAH series..... 2114, 19075 house trailers, regulation..... 10037 how to do business with DSA..... 343 manual DSAM series..... 13833, 15408, 17345 procurement regulation, revision..... 3590 regulations DSAR series..... 10036-37, 17346 unrated household goods traffic, regulations..... 10036, 17346	Delaware County, Pa., soil survey report..... 13056
Deferment from military service, <i>see</i> Conscription.	Delaware River: and tributaries, engineer report— departmental edition..... 4846-52, 6365-67, 8195 document edition..... 4674-80, 6069-71, 7834 bridges construction, use of funds, hearing..... 300 salinity of estuary..... 611
Definitive designs for naval shore facilities..... 9518	Delaware River Basin Commission, appropriations, 1964, hearings..... 17162
Deflectors, launch deflector design criteria and application to Saturn C-1 deflector..... 9145	Delaware River Joint Toll Bridge Commission, compact establishing, consent of Congress, hearing..... 17174
Deformations (mechanics): folding, in expandable structures, application to toroidal shells..... 3161 isometric, screw surfaces..... 11079 plates and shells, flexible, theory, survey of investigations, 1941-57..... 21012 thermal deformations of machine units, effect on machining accuracy..... 13220 <i>see also</i> Plasticity.	Delgarno, A., electron temperatures in ionosphere..... 10892
De Gaulle, Charles, international policies, Aleksander Kawalkowski's article..... 8806	Delinquency, <i>see</i> Juvenile delinquency.
DeGaulle-Adenauer pact..... 7129	Delinquent children, <i>see</i> Juvenile delinquency.
Degrees (colleges, universities, etc.): advanced— fall 1960, enrollment..... 12063 fall 1961, survey of students enrolled, summary..... 4827 conferred— during 1960-61, summary..... 6347 during 1961-62, summary..... 10080 statistics, 1957-58..... 2144 doctor's degrees awarded, 1950-60..... 2154 earned degrees conferred, 1961-62..... 15426 engineering, 1961-62, advance report..... 6320	Della-Bianca, Lino, hydrologic properties of soils in Piedmont forests..... 6519
Hungary— doctors and candidates of science, list..... 7036 new doctors and candidates, list..... 17811	Del Norte County, Calif., Pine Flat and Diamond Flat nickel-bearing laterite deposits..... 9132
Ph. D. output in selected science fields at leading schools, 1960-62..... 19969	Delta wings, <i>see</i> Wings (aircraft).
sciences, mathematics, and engineering, 1949-60..... 17365	DeLucia, Vincenzo, and wife, relief..... 17206
Yugoslavia, doctorates in sciences, 1961-62..... 12578	Demand, <i>see</i> Supply and demand.
DeHuff, Gilbert L., manganese..... 19845	Demele, Fred A., subsonic aerodynamic characteristics of disk re-entry configurations, etc..... 11014
	Demineralization by transport depletion..... 20752
	Demineralizers, <i>see</i> Osmotic demineralizers.
	Deming, N. Mex., flotation and sintering studies on stockpiled manganese ores..... 1242

# INDEX 1963

	Entry		Entry
Democracy: and legislative matters (address)- on way to democracy, citizenship reader for use in public schools by candidates for naturaliza- tion-----	4890 020, 8363	Dental instruments and apparatus: Federal item identification guides for supply cataloging, supple- ments-----	3657 18504
Democratic Republic of Vietnam, <i>see</i> Vietnam.		measuring horizontal tooth mobil- ity-----	18504
Demography, Moroccan Provinces, data-----	5299	SAM contourator, model B, instru- ment for measuring changes of surface contours-----	74
Demolition and clearance practices.	1579	<i>see also</i> names of instruments, etc.	
Demonstration projects, <i>see</i> Recrea- tional areas and demonstration projects.		Dental prosthesis, <i>see</i> Dentistry.	
De Nauw, Lois J., living conditions in Japan-----	10341	Dental Public Health Personnel Serv- ice, introducing-----	7406
Dengler, Robert P., chemical reaction between propellant tank materi- al and rocket fuels or oxidiz- ers when impacted by small high-velocity projectiles-----	16393	Dental research: horizontal tooth mobility, instru- ment for measuring-----	18504
Denham, Margaret, nursing care out- side hospital for cardiovascular disease patients-----	9345	telemetry devices-----	16798
Denial of export privileges-----	14068	Dental Research, National Institute, <i>see</i> National Institute of Den- tal Research.	
Denison, Barbara, library statistics of colleges and universities, 1959- 60, analytic report-----	4816	Dental schools: expand facilities and program for training-----	6199, 17326
Denison Reservoir, wave observa- tions-----	6360	hearings-----	18776
Denke, Paul H., general digital com- puter analysis of statically in- determinate structures-----	1317	law-----	19335
Denman, Gary L., automatic record- ing dilatometer for thermal expansion measurements to 2000° F-----	20295	summary-----	17283
Denmark: bibliography of social science peri- odicals and monograph series, 1945-61-----	7764	reports-----	6180, 7945, 17283
civil aviation, survey-----	5985	Dental supplies, Federal item identi- fication guides for supply cata- loging, supplements-----	3657
Communist Party, 21st Congress-----	2518	Dental technicians, prosthetic, Navy training course-----	12941
economic developments, 1962-----	8395	Dentifrices: stannous fluoride-----	
economy, basic data-----	17556	effect of addition of pyrophos- phates-----	79
educational data-----	8165	low concentration aqueous pro- phyllaxis pastes-----	73
fisheries, trends, 1962-63-----	19233	Dentistry: dental personnel in State health departments, salaries, 1962-----	9354
outdoor recreation survey-----	1380	Dental Public Health Personnel Service, general information-----	7406
preparing shipments to-----	6587	District of Columbia practice, amend act, report-----	13628
report of mission to, President's Panel on Mental Retardation-----	14651	family expenditures, development of questionnaire-----	14674
trade mission to, 1963-----	17564	identifying overly anxious patient in impacted 3d molar surgery-----	72
Dennis, David H., aerodynamic per- formance and static stability at Mach numbers up to 5 of 2 airplane configurations with favorable lift interference-----	1261	Indian Health Division presenta- tions to Council of Federal Dental Services-----	9349
Dennis, Richard, Operation Plumbbob, blast effects on air-cleaning sys- tem-----	141	medical care in public assistance, guides, etc-----	8200
Denny, Charles S., surficial geology and soils of Elmira-Williams- port region, N.Y. and Pa-----	19313	operative----- advanced speeds-----	12940
Densimetric method in studying coal and coke structure-----	19858	and impaction surgery, adreno- cortical responses in patients- patients, stress-----	7639
Density: cross sections near 80th meridian west, analyses-----	11036	effect of local anesthetic pro- cedures-----	13218
distribution, interlevel correlations and variation with wind-----	1750	effect of time of day on adreno- cortical response to oral sur- gery-----	75
drainage basins, investigation-----	17528	prepayment, experiment, Naismith dental plan-----	5684
electron distribution in upper F- region-----	9181	preventive program and Army dental practice-----	13247
invert sugar, aqueous solutions-----	12897	recording deformation in double processing of denture bases-----	78
theory of densification of dry snow on high polar glaciers-----	6362	State radiological health activities as to X-ray machines-----	9357
Dental assistants, civilian volunteers, training for Army facilities, pamphlet-----	18550	third molar impaction surgery, measurement of responses-----	16792
Dental care, <i>see</i> Dentistry.		<i>see also</i> Exodontia—Teeth.	
Dental hygienists, District of Colum- bia license, waive theoretical examination, report-----	13628	Dentists: dental personnel in State health departments, salaries, 1962-----	9354
		professional public health personnel, increase opportunities for training-----	6199, 17326
		hearings-----	18776
		law-----	19335
		summary-----	17283
		reports-----	6180, 7945, 17283

	Entry		Entry
Dentures, <i>see</i> Teeth.		Deserts, transporter, Rolligon Mark 4	
Denudation and orogeny rates, disparity between	15614	desert evaluation	5755, 5757
Denver, Colo.:		<i>see also</i> names of deserts.	
income, education, and unemployment in neighborhoods	9069	Design features affecting asepsis in hospital	9343
occupational wage survey—		Design manual DM series	1597-1606
departmental edition	10897	Designs (aircraft):	
document edition	9818	procedures, military handbook	19080
post offices mail-flo systems, feasibility and effect of systems upon operating costs, GAO report	20717	Designs (architectural), <i>see</i> Architecture.	
Stapleton Airfield, weather observations, hourly, decennial census	11388	Designs (industrial):	
Deoxidation of blister copper by gaseous reduction	1249	contracts for research and design work, USSR	16183
Department stores, <i>see</i> Stores.		fluid amplifier handbook components	9313
De Pass, Rudolph E., fish consumption by food stamp and related low-income families	13958	modularization concept, application to satellite type recorders	1285
Dependent children, <i>see</i> Children.		protection of industrial property, convention—	
Dependents, <i>see</i> Armed Forces—Army—Pay, allowances, etc.—Veterans.		report	20545
de Polo, Taber:		text	20518
clays	19826	USSR—	
feldspar, nepheline syenite and apfite	18070	experimental design work, legal aspects	17997
Deportation:		obstacles face technical designers	721
cases suspended	15344	practices, need for improvement	19680
proceedings, cancel	9882	Designs (patents):	
Deposit insurance, role in bank regulation (remarks)	4658	in official gazette	3983
Depository libraries, <i>see</i> Libraries.		Deslification of caustic leach liquors containing alumina	1239
Depreciation:		Des Moines, Iowa:	
natural gas companies practices—	19193	Municipal Airport, weather observations, hourly, decennial census	13120
new guidelines, realistic and flexible	1445	occupational wage survey—	
Depth perception, <i>see</i> Perception.		departmental edition	10904
Depth perception apparatus, bathymograph, depth-time recorder	6469	document edition	9825
Derby, Conn., four-town redevelopment area, ARA case book	20317	Des Moines River:	
Dermatitis, <i>see</i> Skin diseases.		dam and reservoir, designate as Red Rock Dam, etc.—	
Dermestids, <i>see</i> Beetles.		law	17047
Derricks, <i>see</i> Cranes, derricks, etc.		reports	15259, 17252
Desal, U. D., Explorer XII instrumentation for study of energy spectrum of cosmic rays	12856	De Soto National Memorial, general information	1349
deSavigny, Richard A., aerodynamic characteristics in ground-effect of model with high disk-loading lifting fan mounted in fuselage	3149	De Soto National Wildlife Refuge, general information	17460
Deschln, Celia S., teenagers and venereal disease	177	Des Rosiers, Paul E., jr., low-cost sanitation systems	19141
Deschler, Lewis, Constitution, Jefferson's manual, and rules of House of Representatives	6080	Desserts, frozen, production cost in diversified milk plants, Kans., Mo., and Okla.	14872
Descriptors, <i>see</i> Subject headings.		Destroyers (warships):	
De Selm, H. R.:		United States Navy, history 1902-62	9261
accumulation and cycling of organic matter and chemical constituents during early vegetational succession on radioactive waste area	127	Detection and location of cavitation	4480
vegetation studies related to movement of radioactive wastes, etc.	1836	Detective agencies, employees prohibited employment in any Government service, repeal portion of act of Mar. 3, 1893, report	17247
Desert Game Range, mammals	4967	Detectors:	
Desert lands:		fast solid-state ultraviolet, development	20299
Communist China—		in-core power monitoring, instrument development program	16846
coordinated research on desert regions, reports	8537, 9017	micrometeoroid velocity	19933
sand control research	14395	radiation, radiobiologic problems	16795
survey methods on shifting sand topography	2482	semiconductor, pulse-height response to protons, experimental calibration	11514
extend time for final proof of development, report	13574	spectrally selective photodetectors for middle and vacuum ultraviolet	12870
		ultraviolet photodetectors, characteristics and applications	16366
		vacuum ultraviolet photoionization	7288
		wave, standing, PRD 219, technical manual, Navy calibration program	20007
		<i>see also</i> Leak detectors.	
		Detergency of 12 to 18 carbon saturated fatty acids	12963

# INDEX 1963

Entry	Entry
Detergents, <i>see</i> Cleaning compounds.	
Determinants, recursion relation associated with certain special type determinant.....	9144
Determination of beta activity in water.....	8357
Determination of diffusivity and solubility in 2 phase systems.....	4481
Detonations:	
carbon monoxide-air parameters	
thermodynamic calculations for initial pressures from 1 to 100 atmospheres.....	1318
errata.....	11043
<i>see also</i> Nuclear explosions.....	
Detonators, methods of detonating charges, USSR study.....	14428
Detroit, Mich.:	
area redevelopment manpower report.....	17398
census of housing, 1960, standard metropolitan statistical area, components of inventory change.....	4593
consumer expenditures and income, 1960, advance report.....	7145
supplement.....	7146
electric facilities of area, map--	517, 2266
FDA district headquarters.....	6471
income, education, and unemployment in neighborhoods.....	7174
land purchased for low-rent housing project, transfer for urban renewal purposes--	
law.....	18782
reports.....	17103, 17300
occupational wage survey--	
departmental edition.....	12794
document edition.....	11738
wholesale food-distribution facilities, research study.....	14864
DeTurek, John E., body temperature and carbohydrate values in normal and endotoxin poisoned mice exposed to lowered environmental temperatures.....	1754
Deurbrouck, Albert W.:	
coal-washing equipment, concentrating tables.....	12836
preparation characteristics of coal from--	
Mercer County, W. Va.....	10960
Tazewell County, Va.....	19868
Deuterium, heavy hydrogen isotope, properties, etc., USSR study.....	20779
Deutsch, Morris, ground water contamination and legal controls in Michigan.....	19331
Devaris, Angeliki, relief.....	18829
Development, <i>see</i> Underdeveloped areas.	
Development (economics), <i>see</i> Economic policy.	
Development Loan Fund, loan for construction of water supply system in Saigon, Vietnam, GAO review.....	17510
Device for forming 2-piece telescoping cartons.....	7
Devices:	
airborne collision prevention, symposium.....	9457
mechanical dehairing, for insect egg masses.....	10232
pure fluid control, and design of printed pneumatic circuits, USSR study.....	19387
read labels, FDA publication.....	19246
universal assembly devices at Moscow enterprises, USSR study.....	14215
Devils Jump Dam and Reservoir, construction, hearings.....	13667
Devils Lake Sioux Tribe of Fort Totten Indian Reservation, <i>see</i> Sioux Indians.	
Devils Postpile National Monument, general information.....	12923
Devils Tower National Monument, general information.....	12924
De Voe, James R., application of distillation techniques to radiochemical separations.....	16849
Dew point, humidity-temperature measuring set, AN-TMQ-11, error analysis.....	18490
DeWitt, Richard L., liquid-fluorine system.....	12864
DeWolfe, Mildred R., for-hire motor carriers hauling exempt agricultural commodities, nature and extent of operations.....	4362
DHIA, <i>see</i> Dairy herd improvement associations.	
Diabetes, care, diet, etc.....	13028
Diagnosis:	
cybernetics, use in development, USSR study.....	19726
early differential, of infectious diseases, USSR study.....	849
isotopic myelography, use in neurosurgery, USSR study.....	16112
radioactivity, clinical uses, USSR studies.....	19582
specimens, collection, handling, and shipment.....	9337
syndrome of decompression sickness in historical perspective.....	7191
<i>see also</i> names of diseases.	
Dialectics, <i>see</i> Reasoning.	
Diaminocyclohexanetetraacetic acid, <i>see</i> Acetic acid.	
Diamond, Isabella S., early writings on blind.....	1586
Diamond, W. G., mineral industry of Missouri.....	1215
Diamond drilling:	
Beecher no. 3-Black Diamond pegmatite exploration, Custer County, S. Dak.....	14019
sampling from San Manuel copper mine, Ariz., statistical analysis.....	18093
Diamond Ordnance Fuse Laboratories, technical reports.....	11197, 14637, 16472
Diamonds, industrial, bibliography.....	7740
Diaphragm, metal, for measuring vapor pressures of arsenic (III) oxide.....	9136
Diatomaceous earth, Tallahatta diatomite, Ala.....	16341
Diatomite, minerals yearbook chapter.....	14495
Dichloriodic derivatives of salicylanilide and monohaloid salicylanilides, new synthetic antimicrobial substances, USSR.....	977
Dichlorophenoxyacetic acid, response of cotton to 2,4-D and related phenoxy herbicides.....	18446
Dichromates, determination of spectral sensitivity of retina receivers, USSR study.....	2858
Dichter, Ernest, color can stimulate sales.....	1490
Di Ciccio, Joseph, relief.....	17100
Dickinson County, Mich., Groveland Mine, open-pit iron mining, milling, and costs.....	14501
Dickson, Jean, teaching as a career.....	13869
Dictionaries:	
Apollo Project terminology.....	18131
Chinese-English, modern Communist Chinese usage.....	17846
naval fighting ships.....	18218



Entry	Entry
Dideriksen, Raymond I., soil survey of Adams County, Iowa.....	13054
Diebold, John, automation, its implications for counseling.....	3022
Dielectrics:	
molecular interactions of 2-component liquid systems, Polish studies.....	6914
USSR study.....	12609
Diesel engines, mobile diesel-powered equipment for noncoal mines approved by Mines Bureau.....	18074
Diesel fuel, <i>see</i> Fuel oil.	
Diet:	
artificial, for rearing <i>Heliothis</i> species, laboratory techniques.....	18391
Clinical Center manual.....	12904
conditioning for nutrient restriction in humans.....	1753
effects on urinary excretion of steroids and catecholamines.....	18505
food you eat and heart disease.....	18285
glycine, fed to rats, stress studies.....	1758
influence of dietary factors on plasma cholesterol of growing mice.....	13245
minimal weighted radionuclide intake, mathematical programming models for selection.....	20093
<i>see also</i> Food.	
Dieterich, J. H., litter fuels in red pine plantations.....	12179
Dietics, <i>see</i> Diet.	
Dietitians:	
examination announcement, amdt.....	4611
Veterans Administration, career opportunities.....	11374
Dietrich, Raymond A., Texas-Oklahoma meat industry, structure and marketing practices.....	12044
Differential equations, <i>see</i> Equations.	
Differential harvesting of cotton.....	1630
Differential neutron thermalization.....	7690
Differential sulfatizing process for recovery of ferrograde manganese.....	5487
Diffraction:	
electromagnetic waves in plane metal grating with screen, USSR study.....	19631
plane hydroacoustical wave at boundary of elastic plates, USSR study.....	17923
X-ray—	
data reduction program for IBM 704 and 7090, addenda.....	9273
powder patterns.....	11096, 20941
Diffusers:	
in-flight gains realized by modifying twin side-inlet induction system.....	10978
performance of variable 2-dimensional inlet designed for engine-inlet matching.....	5521
subsonic, data summary.....	16360
Diffusion:	
barriers for refractory metals, investigation.....	13195
diffusivity determination in 2 phase systems.....	4481
fundamentals of diffusional bonding, 7th annual progress report.....	129
multi-group methods.....	1835
potential and effective diffusion constant in polyelectrolyte solution, calculations.....	14602
thermal—	
diffusivity measurements on finite disk.....	124
gases in porous media, negative concentration effect, USSR study.....	8539
Diffusion—Continued	
thermal—continued	
neutron, length measurements in light water from 20° C to 90° C.....	9674
turbulent, theory.....	7607
unsteady, with recombination, in ternary mixture of diatomic molecules, dissociated atoms, and inert gas.....	7278
Diffusion welding, <i>see</i> Welding.	
Digby, Margaret, Plunkett Foundation offers overseas co-op courses.....	8208
Digestive system:	
functions of organs in hot climate, USSR study.....	20771
human, radiotelemetric investigation of temperature, USSR study.....	19588
Digests, <i>see</i> Index-digests—also names of departments, etc., issuing digests—also subjects.	
Di Giacomo, Francesco, relief.....	11789, 17000, 17221
Digital computers, <i>see</i> Electronic computers.	
Digital readout technic applicable to laboratory and aerospace medical monitoring of physiologic data.....	7635
Dilatometers, thermal expansion measurements to 2000° F.....	20295
Dillon, Douglas:	
addresses, etc.—	
Nov. 15, 1962.....	1576
Jan. 16, 1963.....	3387
Feb. 11, 1963.....	5760
Mar. 7, 1963.....	7495
Mar. 14, 1963.....	7494
Mar. 21, 1963.....	7497
Apr. 4, 1963.....	9468
Apr. 30, 1963.....	11357
May 7, 1963.....	11356
May 20, 1963.....	11360
May 22, 1963.....	11359
June 18, 1963.....	13106
June 27, 1963.....	14754
Sept. 17, 1963.....	18355
Sept. 24, 1963.....	20215
Oct. 1, 1963.....	20216
Oct. 8, 1963.....	20217
Oct. 19, 1963.....	20214
Oct. 21, 1963.....	21148
Oct. 29, 1963.....	21149
Dimension stone, <i>see</i> Stone.	
Dimock, D. L., magnetically compressed plasmas in stellarator.....	7700
Dimock, Edward J., II, Hemlock Experimental Forest guide.....	19252
Dinger, J. E., spectra of ocean waves and microseisms as related to storms at sea.....	11164
Dingus, Ky., geology of area (series).....	10274
Dingwell, Andrew G. F., optimization of silicon-germanium thermoelectric modules for Transportation Corps silent boat design.....	16633
Dinkins, Clarence M., patent practices of Federal Communications Commission, preliminary report.....	332
Dinnerware, <i>see</i> Tableware.	
Diodes:	
cesium, discharge effects.....	9597
digital-to-analog conversion technique.....	18230
plasma, effects at cathode as model of magnetogas dynamic energy conversion, USSR study.....	12498
thermionic, chemical regeneration of surfaces.....	16392

# INDEX 1963

	Entry
<b>Diodes—Continued</b>	
tunnel static inverter, adaptation to higher input voltages.....	1372
<b>Diorite, unweathered Virginia ores, flotation of ilmenite.....</b>	5498
<b>Diphenyl control of lemon spoilage.....</b>	1704
<b>Diphtheria:</b>	
diphtheritis encephalitis in rats, cytochemical study of Golgi apparatus.....	7193
general information.....	11234
<b>Diplomatic list.....</b>	3603
<b>Diplomatic relations, see International relations.</b>	
<b>Diplomats, see Ambassadors.</b>	
<b>Dipole antennas, see Antennas.</b>	
<b>Diptera, see Flies.</b>	
<b>Direct communications link, memorandum of understanding between U.S. and USSR.....</b>	14734
<b>Direct energy conversion, see Energy conversion.</b>	
<b>Directional behavior of emitted and reflected radiant energy from gray, asymmetric groove.....</b>	16390
<b>Directories:</b>	
accelerated public works program, approved projects.....	7654
AEC purchasing offices.....	13252
Agricultural Marketing Service, marketing research.....	4335
airports and seaplane bases, airman's guide supplement.....	3604
architects and engineers qualified in fallout shelter analysis.....	7777, 18713, 13254
aviation medical examiners.....	1180
BLS studies in industrial relations, July 1953-62.....	623
careers in Interior Department for college students.....	1181
community wage surveys, 1948-June 1962.....	7817
Congress of United States—official edition, 88th Cong., 1st sess.....	4659
pocket edition, 88th Congress.....	2151
counselor educators.....	373
education 1961-62, higher education, supp.....	12057
education 1962-63.....	15427
education associations.....	12056
Federal Government.....	13843
higher education.....	2155
public school systems.....	15474
State governments.....	4623, 16945
Federal Aviation Agency field facility.....	13256
Federal career, college students.....	1613
Federal statistical, 19th edition, 1963.....	1493
Federal statistics for metropolitan areas.....	19096
Government purchasing, specifications and sales.....	14039
guidance, counseling, and testing personnel in State Departments of Education.....	3605
Health, Education, and Welfare Dept., field directory.....	19796
Indian Affairs Bureau.....	15657
industry wage and union scale studies, 1950-June 1963.....	5671
International Federation of Christian Trade Unions.....	3606
international mail.....	17379
changes.....	2158
key educational media personnel in public schools and library systems.....	20648
key personnel in U.S. Government audiovisual programs.....	
labor market areas, supplement.....	

	Entry
<b>Directories—Continued</b>	
labor organizations, Asia and Australasia.....	19364
labor unions in U.S., 1961, additions, corrections, and deletions.....	9051
local Employment Service and claims offices.....	19127
mailing list houses.....	18309
medical libraries outside U.S. and Canada.....	12913
national, for use in marketing.....	14687
National Institutes of Health scientific personnel.....	9348
national organizations for recreation.....	18221
national wildlife refuges.....	4974
naval fighting ships, errata.....	16453
Naval Weapons Bureau.....	3484
nonpublic secondary schools, 1960-61.....	4820
Ohio's private outdoor and forest recreation enterprises.....	16556
outdoor recreation, Federal and State agencies.....	9319
plastics, knowledgeable Government personnel.....	17352
post offices, 1963.....	14646
post offices by States and counties, 1963.....	16484
Public Health Service public advisory groups.....	9352
refrigerated warehouses in United States.....	16623
school and college personnel work, programs, etc., 1963-64.....	13854
Securities and Exchange Commission, companies filing annual reports.....	9377
small business concerns interested in performing research and development.....	11270
standardization—Federal supply classification class and area assignments.....	2119, 6314, 12039, 19087
SD series.....	2119, 6314, 12039, 19087
State and territorial health authorities, 1963.....	14659
State department of education personnel directly concerned with programs for gifted and talented.....	372
State departments of agriculture, 1963.....	7529
State merit systems, 1963.....	15621
State officials enforcing food, drug, etc., laws.....	13979
State supervisors of pupil transportation.....	2170
State surplus property directors.....	8358
Surplus Property Utilization Division.....	8358
telephone—House of Representatives, Mar. 1963.....	7830
National Aeronautics and Space Administration, June 1963.....	16353
Senate—fall 1962.....	310
fall 1963.....	18963
spring 1963.....	8017
Ulan Bator City, Mongolia, brief instructions for using.....	14211
trade and industrial education—State supervisors.....	2152
teacher trainers.....	2153
traffic safety services national organizations.....	16543
urban planning assistance program projects.....	11371, 13108, 18359
urban renewal project directory.....	4272
wage chronologies.....	18043

Directories—Continued	Entry
ZIP code—	
Alabama .....	20025
Alaska .....	20026
Arizona .....	20027
Arkansas .....	20028
California .....	20029
Colorado .....	20030
Connecticut .....	20031
Delaware .....	20032
Florida .....	20033
Georgia .....	20034
Hawaii and Pacific Islands .....	20035
Idaho .....	20036
Illinois .....	20037
Indiana .....	20038
information, publications for sale by Superintendent of Docu- ments, price list .....	20089
Iowa .....	20039
Kansas .....	20040
Kentucky .....	20041
Louisiana .....	20042
Maine .....	20043
Maryland .....	20044
Massachusetts .....	20045
Michigan .....	20046
Minnesota .....	20047
Mississippi .....	20048
Missouri .....	20049
Montana .....	20050
Nebraska .....	20051
Nevada .....	20052
New Hampshire .....	20053
New Jersey .....	20054
New Mexico .....	20055
New York State .....	20056
North Carolina .....	20057
North Dakota .....	20058
Ohio .....	20059
Oklahoma .....	20060
Oregon .....	20061
Pennsylvania .....	20062
Puerto Rico and Virgin Islands .....	20063
Rhode Island .....	20064
South Carolina .....	20065
South Dakota .....	20066
Tennessee .....	20067
Texas .....	20068
Utah .....	20069
Vermont .....	18270
Virginia .....	20070
Washington State .....	20071
West Virginia .....	20072
Wisconsin .....	20073
Wyoming .....	20074
Dirksen, Thomas R.: determination of lipids in dentin .....	7629
lipid constituents of whole and parotid saliva .....	81
Disability days, United States, July 1961-June 1962 .....	20112
Disability Insurance: benefits under social security pro- gram, don't guess about your rights .....	11286
if you become disabled, social secu- rity benefits .....	9307
patient asks for medical report .....	18312
social security program, facts and figures .....	13045
social security rulings .....	4195
what you need to know about social security disability benefits .....	21109
your social security, basic informa- tion .....	11281
see also Old-age, survivors, and dis- ability insurance.	
Disabled: adults whose disabilities began in childhood, social security ben- efits .....	13049

Disabled—Continued	Entry
Central Intelligence Agency im- proved disability system— hearings .....	18923-924
reports .....	18844, 18902
disability days due to injury, U.S. statistics, July 1959-June 1961 .....	5687
persons injured in home and asso- ciated disability, U.S. statis- tics, July 1959-June 1961 .....	5686
public assistance, program facts .....	10095
what you need to know about social security benefits .....	21109
working with sick and disabled, sketches .....	19157
see also Disability Insurance—Pen- sions—Rehabilitation of the disabled—Veterans.	
Disabled American Veterans: legislative objectives, 1963, hear- ings .....	8014
report, 1962 convention .....	6084
Disarmament: arms control and disarmament— questions and answers .....	18938
research studies in progress or recently completed, semiannual report .....	18323
State Department briefing, Jan. 14, 1963, television transcript .....	1794
disarmament document series .....	1795-96, 20320
documents, 1962 .....	20320
nuclear weapons test ban— negotiations and disarmament, hearing .....	8110
negotiations, renewed at Geneva conference, hearings .....	4777
proposals, technical aspects, hear- ings .....	9812
treaty, why, U.S. policy, state- ments, etc. .....	11530
progressive zonal inspection .....	7663
risk and security (address) .....	4441
statement by Arthur H. Dean, Nov. 6, 1962 .....	1796
Disarmament Agency, see Arms Con- trol and Disarmament Agency.	
Disasters: airport disaster control guide .....	1783
emergencies, civil defense hand- book .....	11653
emergency broadcast system, in- terim plan .....	15478
fire emergency plan for farms .....	14896
first aid guide for use in emergen- cies by USDA employees .....	18415
Florida, emergency loans to— nurserymen .....	6384
vegetable growers .....	6385
Hurricane Carla, Sept. 3-14, 1961, evacuation, etc., civil defense report .....	180
medical self-help training for you and your community .....	21089
motor transport emergency prepar- edness .....	14078
natural— Federal assistance available for damages to roads, etc. .....	14680
Federal relief manual, committee print .....	17312
print additional copies, re- ports .....	19022, 20468
Yards and Docks Bureau manual .....	16699
see also Mine accidents—Relief work.	
Disbursing clerks, Navy training course .....	5654
Disc plows, see Plows.	

# INDEX 1963

Entry	Entry
Discharge:	Diseases of animals:
adverse action, law and regulations, FPM manual supplement -----	animal morbidity reports—
16949	calendar year 1962-----
conditional, benefits for veterans, report -----	18388
18870	fiscal year 1963-----
parolees from supervision, grant D.C. Parole Board discretionary authority, report-----	18389
18896	monthly -----
Discharge effects in cesium diode-----	3454
9597	cooperative control and eradication, code of Federal regulations--
Disciplinary boards, Chief Medical Director of VA to act on recommendations, report-----	18408
15290	Plum Island Laboratory research on foreign diseases of animals--
Discipline:	14878
disciplinary powers and procedures in union constitutions-----	see also names of diseases, or animals affected.
18038	Diseases of fish, freshwater fish diseases, caused by Aeromonas and Pseudomonas-----
District of Columbia schools—	4956
suspension or dismissal of unruly pupils, report-----	see also names of diseases or fish affected.
9899	Diseases of plants:
use of reasonable force, report--	control—
9900	home orchards and vineyards--
see also Military discipline.	11452
Discounts, discount retailing, bibliography -----	home vegetable garden-----
1489	11448
Discrimination, see Race problems.	Intercepted plant pests, list-----
Discrimination in auditory and visual patterns-----	9548
9100	plant disease reporter-----
Discrimination in employment:	4019
age discrimination prohibited in private employment, State laws, May 1963-----	simple weather instrument shelter for investigations-----
14446	15565
Army Department National Conference on Equal Employment Opportunity, proceedings-----	see also names of diseases or plants affected.
4460	Diseases of poultry, see names of diseases.
celebration of Emancipation Proclamation (address)-----	Diseker, E. G., roadbank erosion and its control in Georgia-----
14434	20262
employment practices in performing arts, investigation, hearings-----	Disher, John H., pentaborane fuel in ram-jet engine-----
7993	5518
equal employment opportunity act of 1963—	Disinfection and disinfectants, nursing home environmental health factors -----
hearings -----	13013
17323, 18931	Disk plows, see Plows.
report -----	Disks:
15233	double conical sandwich, natural frequencies and mode shapes, investigation -----
equal employment in Post Office Department -----	16404
11207	finite, thermal diffusivity measurements -----
irregularities in garment industry, investigate, hearings-----	124
2048	flat spinning, in-plane vibrations, corrected copy-----
Labor Dept. program to eliminate (address) -----	1269
9021	Dislocations:
Negroes, equal job opportunities, problems (address)-----	equations of motion, USSR study--
16265	5351
North Carolina equal protection of laws, North Carolina State Advisory Committee report-----	theory, Soviet studies-----
6021	17650
errata -----	Dispensaries, USSR, treatment of all the population on dispensary level, study-----
18719	17944
prohibit, equal pay for equal work, report -----	Dispersion and damping of longitudinal oscillations in thermal plasmas -----
11801	12867
Discrimination reaction:	Dispersion in ground water flowing through heterogeneous materials -----
post-discrimination gradients around stimuli with differential rates of occurrence in discrete response task-----	10288
4396	Display systems:
vibrotactile warning signal potential, comparative evaluation-----	bibliography -----
1769	4437
Diseases:	binary angle of attack, method for establishment of quickening terms -----
bacterial, resistance of mice to, effect of low ambient temperatures on -----	11154
1755	cockpit, for pilot control during re-entry -----
diagnosis, use of cybernetics, USSR study-----	5859
19726	display sharing through color filtering -----
international classification-----	58
3289-90	noise effects on pilot control of terminal phase of space rendezvous -----
medical statistics, Navy, 1961-----	16365
18061	real time flight test display, feasibility study of data presentation -----
publications, price list-----	14905
1397	solid-state self-scanning display device -----
resistance, building with cold air and ultraviolet irradiation, USSR study -----	18497
14120	see also Iatron tubes.
vibration, and thermal dehydration, USSR translations-----	Disposal of refuse, see Refuse.
8935	Disputes, see Industrial arbitration.
see also Contagion and contagious diseases—Diseases of animals—Diseases of plants—also names or classes of diseases.	Dissertations (academic):
	Africa, list of American doctoral dissertations -----
	3044
	home economics, etc., titles-----
	5838
	Library science, 1925-60, annotated bibliography of doctoral studies -----
	17380

	Entry
Dissertations (academic)—Continued	
theses on personnel management...	6029
USSR, Academy of Sciences, 1962, list	12574
Dissociation:	
bond energies, for molecules found in high-temperature chemical reactions, tabulated values...	12874
calculation of transport properties and heat-transfer parameters of dissociating hydrogen, errata	7244
carbon dioxide and components, dissociative relaxation behind normal shock waves...	14571
correlation of dissociation energies of gaseous molecules and heats of vaporization of solids, homonuclear diatomic molecules...	9638
effect on exhaust-nozzle performance	16356
energies of SO <sub>2</sub> and SO	19590
ternary mixture of diatomic molecules, dissociated atoms and inert gas, unsteady diffusion with recombination	7278
Distance measuring equipment, see Odometers.	
Distillation:	
application of techniques to radiochemical separations	16849
polar material in distillate fuel, separation and characterization	19869
sea water conversion, absorption-multistage flash distillation process	20753
Distillation units, thin-film sea water unit, for marine and shore base application, evaluation	6577
Distilled liquors, see Liquors.	
Distinguished Service Cross:	
award to members of Armed Forces for gallantry in cold war incidents—	
hearing	13638
law	15156
reports	13537, 13775
Distortion:	
patterns, recognition by correlation method, USSR study	5274
perception, experimental approach to illusion	1371
Distribution (economics), see names of commodities.	
Distributive education:	
distributive education series	8160, 15436
export trade program, curriculum guide	15436
guide to practical research	8160
standard industrial classification use	17394
training retail salespeople	14659
Distributors (apparatus):	
distribution equipment, Federal item identification guides for supply cataloging, supplements	3656
overprocurement for reciprocating aircraft engines by Navy Dept., GAO review	13998
District Courts:	
civil procedure rules—	
amendments adopted by Supreme Court	4717, 7857
as amended	13662
court reporters furnish transcripts, report	11845
criminal procedure rules, proposed amendments	14812
grand and petit jurors fees, increase, report	11808

	Entry
District Courts—Continued	
judiciary and judicial procedure, D.C. code of laws, revise, codify, enact, report	11838
proceedings, sound recordings use to record, report	13614
to be open at all times for certain business, etc., amend code—	
law	20428
reports	6173, 19016
venue in civil actions on tort claims, reports	11846, 20595
Vermont, terms to be held at Montpelier and St. Johnsbury, report	9969
see also Judges.	
District of Columbia:	
airports, operation, hearings	15320
alcoholic beverage control act, revise—	
hearings	15306
report	20489
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4568
antidiscrimination regulations re sale or rental of private property, hearing	7091
appropriations, 1963, supplemental proposals	4726
appropriations, 1964—	
hearings	13637, 20606
report	13600
atmospheric radioactivity	11153
banks, abstract of reports	4657, 7816
Board of Education, school teachers, temporary, health and life insurance benefits, extend—	
hearing	11910
report	11841
Board of Education, separate budget, hearings	12014
borrowing authority, increase, report	13561
budget, 1964—	
amendments	17196, 18968, 20510
departmental edition	1853
document edition	2028
buildings, dangerous or unsafe, removal, amend act, report	18899
business corporation act, amend—	
law	17041
reports	9859, 13735
chanceries location in—	
business districts, hearings	7995
residential areas, prohibit—	
hearings	13800, 20497
report	13776
cherry blossoms, general information	7328
code of laws—	
judiciary and judicial procedure, revise, codify, enact, report	11838
1961 edition	6200
communicable diseases, prevent spread, amend act—	
hearing	10008
law	20426
reports	6159, 13786
Condemnation of Insanitary Buildings Board, amend act, report	13782
constitutional rights of mentally ill, care, treatment, hospitalization, etc., hearings	17320
construction authorized	3538
consumer expenditures and income, 1960—	
advance report	1163
supplement	16273
correctional industries fund, establish, report	13737



# INDEX 1963

Entry	Entry
District of Columbia—Continued	District of Columbia—Continued
county business patterns, activities covered by OASDI program—	Municipal Court, jurisdiction in civil actions, increase and change name—
15051,	13424
16889	13734
18898	law—
crime legislation—	reports—
hearings—	6163,
report—	13734
15240	municipal theater, use of Capitol and Keith's theater buildings, report—
crime situation increasingly serious, hearing—	17121
6292	nonresidents, exemptions from attachment, amend act, report—
deeds of trust, appointment of new trustees by agreement of parties, report—	18894
6154	nurses registration, lower minimum age limitation—
dental hygienists, waive theoretical examination, report—	law—
13628	reports—
District Training School, <i>see</i> , below, Forest Haven.	6155,
earnings in selected industries, 1962—	13785
5452	nurses, practical, licensing, etc., amend act, reports—
2266	15370, 20488
electric facilities of area, map—	occupational wage survey—
516,	departmental edition—
2266	document edition—
Federal payment and borrowing authority, hearings—	4699
12014	parking facility, offstreet, report—
fire and casualty insurance rate regulation laws, amend, hearings—	13736
17308	population, 1960, characteristics—
firefighting agreements with Md. and Va. communities, amend act, report—	15040
7976	public assistance applicants, Unemployment Compensation Bd. to advise D.C. Welfare Dept. as to status, report—
fireman (firefighter), examination announcement—	13626
6025	Public Health Department—
Forest Haven—	mental health followup project, report—
sale of right-of-way, authorize—	12040
law—	venereal diseases, immediate treatment of minors upon their own consent—
20396	hearing—
13739	law—
voluntary admission of patients, report—	20426
17122	reports—
Government—	6159,
air accommodations, use of 1st-class, GAO report—	13784
12203	public school food services act, amend, report—
Department of Occupations and Professions, administrative functions, GAO review—	18895
8312	public schools, educational employees on leave, increase partial pay, report—
payment of U.S. toward expenses, increase authorization—	18895
law—	Public Utilities Commission, report, 1961—
17034	350
reports—	20086
13562, 13787,	publications, list—
17107	real property, horizontal property act, report—
home repair tax incentives, hearings—	9901
20497	recruiting conference for Federal agencies—
Housing and Home Finance Agency office building, hearing—	7793
2057	redevelopment act, amend to include nonresidential areas, report—
housing code regulations, enforcement and administration, report—	13729
2037	regulations rel. loaning of money on securities, exempt life insurance companies, etc., report—
income, education, and unemployment in neighborhoods—	9898
9077	relocation of elderly people in Washington, D.C., hearings—
Insurance acts, amend relative to false statements—	6287
law—	revenue act of 1947, amend—
13431	law—
reports—	17034
6157,	reports—
13731	13562, 13787,
judges' retirement act, amend, report—	17107
18897	school census, amend act, report—
liens on motor vehicles and trailers, eliminate alphabetical file—	13783
law—	school discipline—
17019	hearings—
reports—	7992
13625,	suspension or dismissal of unruly pupils, report—
13733	9899
Life Insurance companies, amend act—	9900
eliminating recordkeeping, etc., report—	Small Claims and Conciliation Branch of Court of General Sessions, amend act—
13627	law—
relative to annual statements, report—	17015
18838	reports—
relative to capital stock, report—	13732
20466	State Department career in Washington, D.C.—
medical assistance for the aged program, delay in development and implementation, GAO review—	16570
13993	streets, etc., within urban renewal plan, expedite closing, report—
metropolitan police force canine corps, expand, report—	13730
6156	Supreme Court Building, acquisition of additional grounds, reports—
milk, ice cream, etc., packaging sizes, amend act, report—	13623,
18893	13714
minimum-wage status—	traffic act, amend to require report of motor vehicle collisions to police, report—
14805	6158
motor vehicles annual inspection act, amend, report—	uniform commercial code, enact, report—
13738	7977

	Entry		Entry
District of Columbia—Continued		Dixon, G. Ervin, remarks, Sept. 12, 1963	18754
urban renewal—		Dixon, Sidney C.:	
hearings	11890	experimental investigation at Mach number 3.0 of effects of thermal stress and buckling on flutter characteristics of flat single-bay panels of length-width ratio 0.96	1290
report	2037	transtability concept, application to flutter of finite panels and experimental results	18153
used car dealers, administration and enforcement of regulations, report	2037	Dixon Entrance to Cape Spencer, coast pilot, supplement	6039
Washington channel waterfront—		Dnepr River, battle, World War II, role of N. S. Khrushchev, USSR study	20847
hearings	11890	Do you have question about reclamation?	16545
report	2037	Do you need a will?	16733
Washington looks at transportation (remarks)	9792	Dobbins, Claude E.:	
Washington metropolitan area, inauguration of ABCD mail service (address)	5670	livestock and meat industry—	
wills, add properties to existing trusts, report	7975	France	6477
women, legal status	3403	West Germany	6478
workmen's compensation act	393	Docks, floating, Federal item identification guides for supply cataloging, supplements	3660
see also Capital of United States.		Doctors, see Physicians.	
District of Columbia Armory Board, members, increase, report	6162	Doctor's degrees, see Degrees (colleges, universities, etc.).	
District of Columbia Committee, House:		Documents, see Congressional documents—Government publications—also subject of documents.	
calendar	3832	Documents Office, see Public Documents Division.	
hearings	6292	DOD, see Defense Department.	
7991-92, 11888, 11890, 12014, 15306, 17167, 20497.	12014	DOD pamphlets	95-96, 7660, 20318
investigations and studies—		DOD poster	18538
expenses, report	6124	Dodd, Arthur V., mesoclimatic temperature differences in Fort Greeley, Alaska, area	1436
organization, etc. of government of D.C., authorization, report.	6113	Dodge City, Kans.:	
reports	2037, 6154-59, 6162-63, 7975-77, 9859, 9898-9901, 13561-562, 13624-628, 13785, 15240, 17121-122, 18838, 18893-899, 20466, 20488-489.	Arkansas River flood control, engineer report—	
District of Columbia Committee, Senate:		departmental edition	397
calendar	3852	document edition	240
hearings	6292	Doerr, Robert M., high temperature corrosion studies of nickel and cobalt in air and oxygen	10964
10008, 12014, 13800, 17308	11948, 13729-739, 13776, 13782-784, 13786-787, 15370.	Dogfish, spiny, northeastern Pacific area, control, etc.	19242
District of Columbia Court of Appeals:		Doggett, Robert V., Jr., aeroelastic model approach for prediction of buffet bending loads on launch vehicles	20998
naming—		Dogs:	
law	13434	acute radiation sickness, prevention and treatment with sodium gallate, USSR study	12359
reports	6163, 13734	anesthetized, decompression sickness, circulatory and respiratory changes	9630
retirement act, amend, report	18897	development of tissue hypoxia during progressive hyperthermia	18501
District of Columbia Court of General Sessions:		functions of digestive organs in hot climate, USSR study	20771
naming—		Husky, seasonal variations in blood volume, etc.	14910
law	13434	hyperthermia and its dependence on body water during muscular exercise at high environmental temperature, USSR study	17690
reports	6163, 13734	metropolitan police force canine corps, expand, report	6156
retirement act, amend, report	18897	performance, effects of aspartic acid	7686
District Training School, see Forest Haven.		regulation of extracellular potassium in hypothermia	16794
Districts, see Soil conservation.		Dogwood:	
Ditches, drainage, control of common cattail, studies	13190	flowering, growing, general information	4354
Dittmann, Laura L., infant care	13310	growth, effect of fertilizer	7472
Divers, Navy diving manual	20125		
Dividends, see Corporations.—Life insurance.			
Diving:			
alveolar pathways during 90-foot breath-hold dives	7200		
Korean women, physical insulation	1759		
Di Vito, Carmela C., relief	7874, 13399, 13689		
Divorce, statistically oriented studies, bibliography	16512		
Dix, Fort, housing, unnecessary expenditures, for exterior storage facilities, GAO report	14010		
Dixie project:			
construct, operate, and maintain—			
hearings	13810		
report	20575		
water resource development report	15181		

# INDEX 1963

Entry	Entry
Doklady Akademii Nauk SSSR (periodical):	Doppler effects:
translations..... 5134, 15787, 15865	detection of Doppler shift by monochromator wavelength modulation..... 14989
Dolan, Rosemary, medical care of veteran, bibliography..... 9479	large fast ceramic reactors, calculations..... 14981
Dolata, Sonja, relief..... 17199	single station doppler-interferometer rocket tracking technique..... 3123
Doll, Raymond J., farm debt as related to value of sales..... 6437	Dorchester County, Md., soil survey report..... 16565
Dollars, and gold reserves, foreign..... 2139, 12053	Dorodnitsyn, A. A., integral method, application to nonequilibrium flows over pointed bodies..... 16406
Dolomite, Lockport, N.Y., redescription of 3 species of corals..... 6555	Door, John V. N., 2d, geology and ore deposits of Itabira district, Minas Gerais, Brazil..... 15609
Dolphins, ultrasonic and sonic detection characteristics, USSR study..... 17980	Dosimeters, solid state devices, applications..... 3227
see also Cetacea.	Dosimetry:
Dom Bosco quadrangle, Brazil, geology and ore deposits..... 602	absorbed dose measurement, construction of calorimeters..... 1334
Dombrowski, Elizabeth A., relief of children..... 13495	clinical, recommendations of International Commission on Radiological Units and Measurements..... 16417
Domenech, Jose, relief..... 13499, 18994, 20418	control on atomic ships..... 2530
Domestic commerce, see Commerce.	neutron flux produced by neutron generator, measurements..... 9633
Dominican Customs Receivership, records, preliminary inventory..... 1328	radiobiological, recommendations of International Commission on Radiological Units and Measurements..... 11095
Dominican Republic:	solid state devices..... 3227
agricultural commodities, agreements..... 7456, 20172	Doss, Mildred A., index-catalogue of medical and veterinary zoology, Trematoda, etc..... 16716
economic developments, 1962..... 8409	Doty, Maxwell S., Conference on Primary Productivity Measurement, Marine and Freshwater, proceedings, 1961..... 16858
new constitution..... 14300	Doucette, C. F., narcissus bulb fly..... 11454
Haiti boundary, study..... 20150	Doud, Bobbie, education associations, directory..... 12057
portland cement, determination of likelihood of injury..... 9458	Dougall, Richardson, historical summary of United States-Korean relations, with chronology of important developments, 1934-1962..... 1508
proving grounds, communications and other facilities, operation, agreement..... 1534	Dougherty, Lloyd G., relief..... 11926
radio communications, amateur, agreement..... 16584	Dougherty County, Ga., geology and ground water resources..... 12232
weather stations, cooperative meteorological program, agreement..... 5730	Douglas, John W., nomination, hearing..... 8124
Domitz, Stanley, direct-current low-pressure plasma source..... 9166	Douglas County, Colo., geology of Kassler quadrangle, Jefferson and Douglas counties, Colo. (series)..... 10290, 14025
Donabedian, George, Medical Department support to Fleet Marine Force, chap. 12, Handbook of Hospital Corps, Navy..... 7187	Douglas County, Oreg., geology of Anlauf and Drain quadrangles..... 5015
Donaldson, James G.: chloridization of galena and sphalerite by contact with chlorides..... 20967	Douglas County, Wash., forest statistics, 1959-60..... 15587
recovery of lead and zinc from slimes..... 16335	Douglas fir, see Fir.
Donbass, USSR, see Donets Basin USSR.	Douglass, D. L., corrosion mechanism of zirconium and alloys, etc..... 14978
Donets Basin, USSR, Donbass..... 2559	Douglass, James E., determining slope of neutron moisture meter calibration curves, etc..... 8302
Don, Bertram, characteristics of distant comets..... 7283	Doumanl, George A., relief..... 20553
Donnelly, Charles H.: material relating to U.S. defense policies, 1962..... 18808	Douslin, D. R., inclined-piston dead-weight pressure gage..... 5478
United States defense policies in 1962, print as House document, report..... 17129	Douty, H. M., note on British National Incomes Commission..... 19804
Donnelly, George R., Japanese photographic industry, development, 1961..... 145	Doves, see Pigeons.
Doors:	Dow, Marvin B., room-temperature shear and compression tests of stiffened panels with integrated or attached cooling circuits..... 9148
aircraft hangar—full group power-operated horizontal sliding type, standard of trade..... 7728	Dow, Robert L.: fluctuations in Maine shrimp landings..... 15519
partial group power operated horizontal sliding type, standard of trade..... 7727	lobster, Maine population biological fluctuations check, etc..... 4944
power-operated unbraced-canopy type, standard of trade..... 7729	
glass, accidents, health departments, survey in 16 communities, Jan.-June, 1963..... 21084	
Dopovidi Akademii Nauk Ukrainskoi RSR (periodical): translations..... 975, 12415	

	Entry
Dow, Robert L.—Continued	
method of predicting fluctuations in sea scallop populations of Maine	4946
Dowd, Patrick J., chronically implanted electrode for recording nystagmus	7630
Dowels, chamfered holes, effect on resistance to shock loads in shear	11160
Down, <i>see</i> Feathers.	
Down's syndrome, <i>see</i> Mongolism.	
Downwash (aircraft):	
general time-dependent lift and downwash distributions on finite wings in subsonic flow, integral equation	3141
impinging uniform jets, theoretical and experimental studies	14753
Doyle, Donald V., performance of bolted joints in Douglas fir	15577
Doyle, William C., relief	11771, 18991, 20403
Draft (military), <i>see</i> Conscription.	
Drafting, general, Army technical manual	1807
Draftsmen, apprenticeship and training standards	7652
Drag (aerodynamics):	
approach and landing investigation at lift-drag ratios of 3 to 4 utilizing delta-wing interceptor airplane	10997
blunt-nosed 10° half-angle cone at Mach no. 15, free flight measurements	5566
determinations for artificial satellites	18310
falling sphere, upper atmosphere density obtained from drag measurements	11479
lift and drag of swept-wing fighter airplane at transonic and supersonic speeds	10983
minimum induced, of nonplanar lifting systems	11090
errata	18168
swept-wing heavy-bomber configuration with large store (nacelle), Mach number, 1.61, store interference, origin and distribution	12843
towed spheres, conical wings and cones used as decelerators at Mach nos. 1.57 to 4.65, aerodynamic characteristics	11065
Drain quadrangle, Oreg., geology	5015
Drainage:	
basins, density and streamflow	17528
channels and ditches, control of common cattail	13190
Middle Snake River, water temperature studies for 1958	8284
publications, price list	18277
sugarcane, efficient system	18395
Drake, Harold J.:	
graphite, minerals year book chapter	14496
talc, soapstone, and pyrophyllite	18109
Drake, M. K., techniques for activation measurement of resonance integrals	14963
Drake, E. J., visit to Soviet corrosion chemistry institutes, June 25-July 4, 1962	7717
Drama:	
copyrighted—	
Jan.-June 1962	2107
July-Dec. 1962	20614
Draskoczy, P. R., catecholamine release from adrenal slices and rate of respiration	20311

	Entry
Drawings:	
instrument landing system installation drawings	10110
military construction, Army and Air Force, engineering manual, change	6374
scientific and technical, copy-righted	4790
transmission voltages, line construction	11257, 11259, 14685
insert	14683
Dredging, foreign dredge act not applicable to Virgin Islands, opinion of Attorney General	19774
Drees, J. M., second harmonic feathering device on UH-1A helicopter	16632
Dreifuss, Philip, hospital engineer in construction sequence	7404
Dreischbach, R. R., new species of spider wasps, genus <i>Auplopus</i>	9234
Dreissena, <i>see</i> Mollusks.	
Drennan, Henry T., library research in progress	12065
Dressings (sterile), <i>see</i> Bandages and bandaging.	
Drever, Carol A., economic developments in Federation of Malaya, 1962	8405
Drewes, Harold, geology of Funeral Peak quadrangle, Calif. etc.	14024
Dried foods, freeze-dried, palatability tests	14870
<i>see also</i> names or classes of foods dried.	
Drill (military), <i>see</i> Military drill.	
Drilling, <i>see</i> Diamond drilling—Rock drilling—Well drilling.	
Drills (tools):	
pneumatic rock drills, noise, measurement and significance	5491
rotary drilling variables, laboratory studies	3087
Drinking water, <i>see</i> Water.	
Drischler, Joseph A.:	
integral equation relating general time-dependent lift and downwash distributions on finite wings in subsonic flow	3141
time-dependent air forces, on wings, etc.	3135
Driscoll, Richard S., repellents reduce deer browsing on ponderosa pine seedlings	19256
Driver, Cornelius, static stability and control characteristics of airplane model with tail surfaces outboard of wing tips, etc.	5537
Drivers, <i>see</i> Automobile drivers.	
Driving system, <i>see</i> Control systems.	
Droge, John H., economic feasibility of radiation-pasteurizing fresh strawberries, etc.	19090
Drones, <i>see</i> Airplanes.	
Dropouts, <i>see</i> High schools—School attendance.	
Drop-outs in magnetic tape systems	3220
Drop-weight test, <i>see</i> Brittle fracture.	
Droppelman, LeAnn, interpolation procedure for calculating atmospheric band absorptions from laboratory data	12902
Drosophila melanogaster, <i>see</i> Flies.	
Droughts:	
effects—	
Colorado River basin	20733
Pecos River depletion in New Mexico	5037
Rio Grande Basin	8335
Southwest, general summary	14022
Texas, central and south	19312
low flow probability distribution, analysis	10298

# INDEX 1963

	Entry	Entry
Droughts—Continued		
Southwest—		
meteorologic phenomena-----	605	
1942-56 (series)-----	605,	
8335, 14022, 19312,	20733	
Drug addiction, <i>see</i> Narcotic habit.		
Drug stores, <i>see</i> Stores.		
Druggists, <i>see</i> Pharmacists.		
Drugs:		
abuse, proceedings of conference--	9510	
and heart disease, review of re-		
search grants by National		
Heart Institute-----	19961-962	
and kidneys, review of research		
grants by National Heart In-		
stitute-----	19962	
and related products, regulation by		
States and local governments,		
report-----	13569	
aviation medicine, guide to haz-		
ards-----	13253	
code of Federal regulations-----	10107	
dangerous, abuse in California,		
hearings-----	8123	
effect of metabolism, USSR study--	20764	
effects on foetus-----	1923	
F.D.C. regs-----	4975, 10203, 12143-145	
food and drug law history-----	19249	
food, drug, and cosmetic act--		
amendments of 1962--		
FDA conference on Kefauver-		
Harris drug amendments and		
proposed regulations, pro-		
ceedings-----	8288	
law, summary-----	564	
FDA enforcement and compliance		
monthly report-----	6472	
notices of judgment-----	4143	
text-----	3975	
text-----	4976	
food, drug, and cosmetic laws, State		
officials enforcing, directory--	13979	
import detentions, report-----	12147	
interagency coordination in re-		
search and regulation, hear-		
ings-----	4781, 10014,	19054
literature, factual survey-----	17311	
new, developed by Armenian Insti-		
tute-----	19450	
new, FDA approval, facts for con-		
sumers-----	15540	
pharmaceutical industry, outlook		
for 1963 and review of 1962--		
5963		
pharmaceutical services, guides and		
standards for public assist-		
ance-----	13891	
pharmacodynamics of psychic func-		
tions of central nervous sys-		
tem, Czechoslovak study-----	12424	
publications, price list-----	14654	
read labels, FDA publication-----	19246	
USSR administration, improve-		
ments needed-----	19534	
veterans, assist in obtaining needed		
drugs and biologicals, hear-		
ings-----	15334	
<i>see also</i> Anti-fatigue drugs--Nar-		
cotics--also names of drugs.		
Drums (containers):		
steel, empty, Govt-owned, unneces-		
sary annual expenditures by		
Army and Navy Depts. for		
leasing commercial facilities		
to store, GAO report-----	20720	
steel shipping, current industrial		
reports-----	3574, 11029	
Dry batteries, <i>see</i> Electric batteries.		
Dry cargo service and area report----	3048	
Dry cells, <i>see</i> Electric batteries.		
Dry cleaners and dyers, fair labor		
standards act, Interpretative		
bulletin-----	11378	
Dry cleaning, plants, design and con-		
struction, engineering man-		
ual-----	12089	
Dry Creek:		
geology and ground-water resources		
of area-----	8345	
Russian River flood control, engi-		
neer report--		
departmental edition-----	2221	
document edition-----	1990	
Dryer, Murray, aerodynamic charac-		
teristics of several flat-bottom		
configurations at Mach 3.0 and		
3.5-----	3111	
Drying, equipment, Federal item iden-		
tification guides for supply		
cataloging supplements-----	3655	
<i>see also</i> names of substances dried.		
DSA, <i>see</i> Defense Supply Agency.		
Dual distribution, <i>see</i> Competition.		
Dubendorf, Justine M., relief-----	13501,	
18987,	20408	
Duberg, John E., standard atmos-		
phere, 1962-----	7303	
Dubin, Maurice:		
direct measurements of cosmic dust		
showers-----	3146	
interplanetary dust measurements--	21016	
meteoroid effects on space explora-		
tion-----	20983	
Dubins, Josephine, relief-----	7902	
Dubna, Russian SFR, Joint Institute		
for Nuclear Research, proceed-		
ings of working conference on		
slow neutron physics, 1961--	18563	
DuBridge, R. A.:		
detectors for in-core power moni-		
toring, etc-----	16846	
in-core power monitoring of nuclear		
reactors-----	7692	
Dubuque North quadrangle, geology--	10281	
Duck Creek Pass quadrangle, geology--	12221	
Duckart, A. C., in-core instrumenta-		
tion, telemetering-----	4478	
Ducks, identification guide-----	17451	
Ductile rupture, <i>see</i> Metals.		
Ducts (aircraft):		
duct closure valves for hot cycle		
rotor system-----	14751	
Dugan, James F., Jr., rotating-stall		
limits in supersonic turbofan		
engine-----	5525	
Dugger, Roy W., training for job		
under MDTA-----	12081	
Duke, Benjamin C., educational media		
research in Far East, instruc-		
tional uses and research direc-		
tion-----	15449	
Du Large Bayou:		
flood control survey, etc., engineer		
report--		
departmental edition-----	2178	
document edition-----	2006	
Duller, Charles E., flow visualization		
techniques in helium-----	9183	
Dulles International Airport:		
annual report, 1962-----	9218	
general information-----	4881	
operation, transfer responsibility,		
hearings-----	15320	
snow, ice, slush removal and dis-		
posal equipment, evaluation--	9454	
Duluth, Minn.:		
Duluth-Superior Harbor wave ac-		
tion and breakwater location,		
hydraulic model tests-----	4874	
port, harbor conditions, etc-----	10089	
principal electric facilities, map--	2266	
Williamson-Johnson Airport,		
weather observations, hourly,		
decennial census-----	13123	
Dumaplin, Faustino G., Jr., relief----	17208	
Dunaliella salina, <i>see</i> Algae.		



# JANUARY-DECEMBER

	Entry		Entry
Duncan, John P., jr.:		Dworshak, Henry C., memorial serv-	
addresses, etc.		ices	1963, 9797
Sept. 19, 1962	17	Dworshak Dam and Reservoir:	
Dec. 11, 1962	1668	naming—	
Mar. 5, 1963	16728	law	17026
Duncan-Peters, Stephen:		reports	13631, 13705
Libya—		Dworzanski, Anna, <i>see</i> Smal, Anna.	
market for U.S. products	2382	Dworzanski, Jan, <i>see</i> Smal, Jan.	
living conditions	5063	Dwoskin, Philip B., market test of	
Dundy County, Nebr., soil survey re-		instant sweetpotatoes	5827
port	9390	Dynamic stability, <i>see</i> Stability of	
Dunes:		aircraft.	
coastal—		Dynamic stress concentration fac-	
California, reconnaissance	6357	tors	18265
near Florence, Oreg., ground wa-		Dynamics:	
ter supply in area	5031	gas, in space exploration	5551
Dunkelman, Lawrence:		slideout, of vehicle equipped with	
spectrally selective photodetectors	12870	tricycle skid-type landing-gear	
for ultraviolet	16366	system	11071
ultraviolet photodetectors		errata	19911
Dunn, J. H., NRL services in develop-		structural, numerical procedure for	
ment of tri-service missile		shock and Fourier analysis	3225
range radar instrumentation	12954	test, aircraft litter installation, ex-	
Dunn, James E., esophageal cooling		perimental research	13098
as technic of selective brain		wetting in brazing and soldering	12966
hypothermia	13216	<i>see also</i> Magneto-hydrodynamics.	
Dunning, Robert S., guidance scheme		Dynamos, <i>see</i> Electric generators.	
using approximate solutions of		Dynapak extrusion I & E fuel ele-	
trajectory equations to control		ments	18565
aerodynamic skip flight of re-		Dysentery, diagnosis with use of lumi-	
entry vehicle	16397	nescent serum, USSR study	14122
Duoplasmatron, vacuum ultraviolet		Dysprosium oxide, thermal expan-	
light source	19896	sion	7217
Duplicating paper, <i>see</i> Paper.		Dysprosium sesquioxide, high temper-	
Duplicating processes, in-office repro-		ature heat contents and entrop-	
duction methods using GSA		pies	14513
supplies	539		
DuPont de Nemours, E. I., Company			
of America, procurement of			
aluminum caps and cans with-			
out adequate pricing data under			
AEC contracts, GAO re-			
port	14003		
Durable goods, <i>see</i> Commercial prod-			
ucts.			
Durfee, James R., nomination, report	20538		
Durfor, Charles N.:			
chemical quality of surface waters			
of Pennsylvania	6566		
water requirements of styrene, bu-			
tadiene and synthetic-rubber			
industries	12231		
Durum wheat, <i>see</i> Wheat.			
Dust:			
dustproofing of soils	17413		
lunar surface, USSR study	15801		
<i>see also</i> Coal dust—Cosmic dust—			
Pneumoconiosis.			
Dusta and dusting:			
aerial application, problems	16866		
Piper PA-25 Pawnee distribution			
patterns	18398		
Dutch visitor's impression of Czech-			
oslovakia	5140		
Dutcher, L. C., geology and hydrology			
of Agua Caliente Spring, Palm			
Springs, Calif.	8346		
Dutchle, Richard E. C., engineering			
materials list	16857		
Duties, <i>see</i> Tariff— <i>also</i> names or			
classes of articles imported.			
Duty, honor, country (character guid-			
ance discussion)	102		
Duva, James S., display sharing			
through color filtering	58		
Duvall, Wilbur I.:			
vibrations from—			
blasting at Iowa limestone quar-			
ries	16340		
instantaneous and millisecond-			
delayed quarry blasts	5479		
Dwarf mistletoe, <i>see</i> Mistletoe.			
Dwellings, <i>see</i> Housing.			

## E

E. Brooke Matlack, Inc., motor vehicle	
accident	5106
E.L.K. Oil Co., relief	15211, 16991
E.R.S., <i>see</i> Economic Research Ser-	
vice.	
E.S.D., <i>see</i> Earth Sciences Division—	
Electronic Systems Division.	
Ends, Mabel L., economic develop-	
ments in Japan, 1962	8406
Eagle (periodical)	3608
Eagles, bald eagle, 6-cent air mail	
postage stamp (poster)	12969
Ear:	
rabbits, effects of adrenaline and	
noradrenaline on peripheral	
vessels	18470
rabbits, influence of ambient tem-	
perature on relation between	
skin temperature and blood	
flow	14907
ventilation of normal and blocked	
middle ear	4409
Earhart, Amelia, 8-cent air mail post-	
age stamp (poster)	14644
Earl, Kenneth M., manganese de-	
posits, Aroostook County,	
Maine	3077
Early writings on the blind	1586
Earnings, <i>see</i> Wages.	
Earphones, <i>see</i> Headsets.	
Earth:	
astrodynamic constants	14547
crustal structure in—	
area of Indian Ocean, application	
of seismo-acoustic radiobuoys	
for studying, USSR study	8784
zone of transition from Asian con-	
tinent to Pacific Ocean, USSR	
study	12657
deep drilling as method of studying	
earth's crust, USSR study	14289
energy budget at earth's sur-	
face	16756-757

# INDEX 1963

Entry	Entry
Earth—Continued	East (Middle East):
figure determining through gravity anomalies, USSR study.....	accessions list, Library of Congress American Libraries Book Procurement Center, Cairo.....
free oscillations, study.....	consumption capacity of people, translations.....
infrared horizon.....	economic challenge of Middle East (address).....
lunar flight study series, trajectories in earth-moon space with symmetrical free return properties.....	Near and Middle Eastern series.....
moon trajectories, geometrical characteristics of lunar orbits.....	translations.....
penetration in depth, USSR study.....	925, 932, 2478, 2780, 5266, 5368, 5415, 6738, 6833, 6983, 7049, 8460, 8600, 8832, 8841, 8862, 9010, 10515, 10645, 10719, 10869, 12476, 12538, 14203, 14236, 14311, 14322, 15692, 15878, 15947, 16025, 16095, 16190, 16206, 17606, 17636, 17710, 17854, 17924, 17937, 18007, 19397, 19718, 20788.
radiation—	United States foreign aid program, report of study.....
experimental determination, USSR study.....	East (Near East):
power input to small spinning flat plate, application to satellite.....	Communist parties.....
reflected solar, incident upon spherical satellites in general elliptical orbits.....	foreign operations appropriations, 1964, hearings.....
reflected solar, upon arbitrarily oriented spinning flat plate.....	foreign relations of U.S., 1942—
rendezvous orbits, influence of precession on lunar mission requirements.....	departmental edition.....
shells, origin.....	document edition.....
sodium in earth's atmosphere.....	Near and Middle Eastern series.....
solar flux incident for spectral region 50 A to 3000 A for top of atmospheres of neighboring planets.....	trade with United States, statistical report, 1959-61.....
structure of F-layer and reasons for convection in core, USSR study.....	East (U.S.):
surface layer, wind velocity and temperature fields, USSR study.....	annosus root rot in pines.....
surface, strontium-90, summary and interpretation of world-wide soil sampling program.....	cost of transporting freight.....
upper mantle project, hearings.....	10352-353
world economics, development, important problems, USSR study.....	Instrument approach procedure charts and airport obstruction charts, dates of latest prints.....
see also Satellites—Terrestrial magnetism.	log cabins, rustic work and unseasoned wood, protection from insects.....
Earth movements, see Subsidesces (earth movements).	stream gaging stations, low-slow frequency curves.....
Earth satellites, see Satellites.	East Africa, see Africa.
Earth sciences, see Geophysics—Meteorology—Science.	East Asia, see Asia.
Earth Sciences Division:	East coast, see Atlantic Coast.
special reports.....	East Europe, see Europe.
technical reports.....	East Fork Watershed:
Earthware, see Pottery.	Trinity River, engineer report—
Earthquakes:	departmental edition.....
Altay, seismicity, USSR study.....	document edition.....
Coast and Geodetic Survey as central depository of data, hearings.....	East Germany, see Germany.
epicenters, determination on electronic computer, USSR study.....	East North Central States, see Central States.
nuclear reactors and earthquakes.....	East South Central States, see Central States.
physics of seismology, USSR studies.....	East Tintic district, Utah, geothermal gradients in drill holes less than 60 feet deep.....
United States, investigation.....	Eastaboga, Ala., railroad accident.....
USSR.....	Eastern Air Lines, Inc.: accident.....
Earthwork and structures, design of structures to resist effects of atomic weapons, engineering and design manual, change.....	American Airlines merger, staff report.....
East (Far East):	Eastern Europe, see Europe.
agricultural situation, 1963.....	Eastern Florida coastal warning facilities chart.....
educational media research, survey.....	Eastern Magnesia Talc Co., mining and milling methods and costs.....
Far Eastern series.....	Eastern Shore (Va.): hurricane survey, engineer report—
13062-65, 14706, 16573, 18326	departmental edition.....
foreign operations appropriations, 1964, hearings.....	document edition.....
geophysical research.....	Eastern States, see East (U.S.).
USSR Far East, basic nonmilitary information.....	Eastern Utilization Research and Development Division:
USSR shipping, history.....	career opportunities, you and utilization research.....
	laboratories and functions.....
	proteins, basic research.....
	publications and patents, list.....

	Entry
Eastern, Western, and Southeastern Carriers' Conference Committee, emergency board report...	12082
Easton, Pa.: occupational wage survey— documental edition.....	10907 9828
Eastport, Maine to Montauk Point, N.Y., coastal warning facilities chart, 1963.....	14776
Eating places, see Restaurants, lunch rooms, etc.	
Eaton, Esther M.: evaluation and testing in teaching modern foreign languages.....	4815
source materials for secondary school teachers of foreign languages.....	2169, 8157
Eaton, William W., address, Sept. 12, 1963.....	18758
Eavesdropping: investigation, hearings, 1958-61, summary-report.....	2102
legislation, Attorney General's program, 1962, hearings.....	4788
Eberle, A. M., cloud seeding in Black Hills.....	2105
Eberle M. Smith Associates, Inc., incorporation of shelter into schools, interim edition.....	9739
Ebullition, nucleate-boiling, effect of multi-g accelerations.....	11017
Eby, Harry J., manure disposal lagoons.....	16713
Echinoids, see Sea urchins.	
Echo A-12, see Satellites.	
Eckerson, Louise O., guidance in elementary school.....	376
Eckert, James B., automation at commercial banks.....	525
Eclipses: lunar occultations of 2 discrete radio sources, 1963-64.....	21029
occultations, application to geodesy— sun, total, radio measurements.....	20649 1738
Ecology: bottom communities of invertebrates of Sea of Okhotsk, USSR study.....	5403
land and marine, USSR, translations.....	8876
Norway rat.....	21032
onsite research of Biology and Medicine Division, AEC, listing of projects, etc.....	1841
sea aphid in Blue Mountain area.....	18445
sea mammals, USSR study.....	6900
shrews (genus Sorex) of western Siberia, USSR study.....	7031
Soviet research.....	12586
Soviet studies.....	10479
trends, evaluating on campgrounds.....	19262
trouble factor, effect on wild life.....	16132
White Oak Creek and Lake, limnology survey.....	11566
White Oak Creek ecological survey, 1950-53.....	9684
White Oak Lake and environs, vertebrate fauna survey.....	11567
Economic and legal problems of Government patent policies, report.....	15402
Economic and sociological advances of Cuban revolution.....	2529
Economic aspects of Government patent policies, hearings.....	12028
Economic assistance, see Foreign aid.	
Economic conditions: balance sheet of production and distribution of products between departments, Communist China study.....	850
census of population, 1960, State	

	Entry
Economic conditions—Continued	
economic areas.....	11639
data, value of economic information (address).....	13345
economic indicators.....	3609
supplement 1962.....	1974
economic outlook (remarks).....	17435
economic reports.....	4514-51 5963-82, 7732-33
economics and public welfare patterns (address).....	20932
Federal budget as economic document— hearings.....	13438
report.....	17241
growth— and agriculture, report of study group.....	10047
and inflation (address).....	10181
and labor market policy.....	19783
from stimulus of President's tax program (remarks).....	9470
measuring and analyzing.....	17437
projections to 1976 and 2000.....	3250
technical resources for growth (address).....	18758
through effective use of technology (address).....	15138
through research, plant modernization, etc. (address).....	18631
impact of— defense procurement, hearings.....	11731
military supply and service activities.....	13439
tax-exempt foundations and charitable trusts.....	2063, 18960
influence on children, research programs, studies in progress.....	176, 11647
meeting problems of structural unemployment caused by changes in technology (address).....	19778
methodology and scores of socioeconomic status, description of CB measures used in 1960 census program.....	10911
mobility and worker adaptation to economic change in U.S.....	18016
new era of economic opportunity (address).....	7808
nonwhite workers, status, 1955-62.....	19801
publications, price list.....	1395
report of the President to Congress— departmental edition.....	3258
document edition.....	2034
hearings.....	6065
print additional copies, reports.....	8080, 11865
report.....	6285
science, technology, tax policy, and economic growth (remarks).....	7500
some aspects of current scene (remarks).....	11359
state of American economy (address).....	9788
tax policy and U.S. economic prospects (remarks).....	11363
technology, role and effect, hearings.....	17335
technology's role in economic growth and development (remarks).....	4647
United States economy in 1963 (address).....	5461
upswing in rural America.....	11469
world trade information service.....	2418-26
see also names of countries, States, etc.	
Economic considerations in air pollution control.....	1419

# INDEX 1963

Entry	Entry
Economic cooperation, <i>see</i> Foreign aid.	Economic policy—Continued
Economic development, <i>see</i> Economic policy—Foreign aid.	USSR—Continued
Economic effects of U.S. grades for lamb	system, translations----- 888, 947, 1093,
Economic evaluation of hide curing methods	2609, 2677, 2915, 5161, 5217,
Economic indicators	5260, 5271, 5295, 5317, 5359,
historical and descriptive supplement	6768, 6803, 6856, 6939, 6990,
relating to equal pay, 1963	7011, 7048, 7105, 8491, 8555,
Economic Inquiry into food marketing	8597, 8646, 8827, 8861, 8943,
Economic Joint Committee:	8953, 9005, 10427, 10460, 10495,
committee prints, 1972, 1974-75, 4666,	10544, 10563, 10615, 10629,
7829, 13439, 18791, 20448-450	10653, 10711, 10727, 12287,
hearings, 1971, 1973, 6065, 1171-732,	12312, 12386, 12566, 12612,
13438, 13440, 17054-55, 20447	12663, 12702, 12745, 14088,
publications, Jan. 1947-Aug. 1962,	14101, 14185, 14239, 14384,
supplement	15668, 15775, 15827, 15860,
reports	15913, 15941, 15991, 16024,
Economic orders, Civil Aeronautics Board	17663, 17741, 17774, 17940,
Economic planning, <i>see</i> Business.	17965, 19459, 19477, 20765,
Economic poisons, <i>see</i> Pesticides.	20774, 20800, 20816, 20858
Economic policy:	Economic regulations, Civil Aeronautics Board----- 3610
administration's effort to stimulate economic growth (remarks)	Economic research (Chinese periodical):
bookkeeping in planning organizations, USSR study	translations----- 2786,
comprehensive planning, bibliography	2897, 10385, 10416, 12433, 12641,
cybernetics and planning, USSR study	15816, 17835, 17921, 19749.
economic issues that affect well-being of our free enterprise system and economic strength of our nation in world (address)	Economic research (North Korean periodical):
economic policies and practices—central banks in foreign countries, materials	translations----- 6889
prices in key industries, foreign government policies	Economic Research Service:
Increasing economic growth through productivity, competitiveness and profits (abstract of remarks)	agricultural economic reports, 351-352,
International trade and economic development (address)	4801-3, 6315-17, 8154, 10047-49,
Middle America, policies and programs, report	12041-44, 13837-840, 17354,
national economy based on agriculture and led by industry, Communist China, translation	19088-89, 20624-625.
new indicators to consumer and industrial buying motives, etc. (speech)	appropriations, 1964, Agricultural Dept., hearings----- 9021
policies to ensure U.S. products competitive place in world markets	ERS-foreign series----- 2132-35,
President's tax and expenditures control program (remarks)	15420-421, 17357, 19092
problems and prospects (remarks)	ERS series----- 354-355,
States, model economic development program (remarks)	2124-31, 8147-53, 10051-53,
three faces, monetary, fiscal, and structural (remarks)	12048-51, 15415-419, 17356,
United States and Europe, policy in evolution	19090-91, 20626.
USSR—	foreign agricultural economic report----- 17359
analyzing information on operational and production planning	periodic reports, list----- 4372
international economic relations, translations	reports, checklist----- 3510
plans for 1964-70, adequate foundation needed	Economic setting for vocational guidance----- 20931
	Economic, social, and demographic characteristics of Spanish-American wage workers on U.S. farms----- 8144
	Economic-technical information in Czechoslovakia and GDR----- 7058
	Economics:
	agricultural enterprises, USSR studies----- 8800
	automation, perspective (address)----- 18030
	challenges of 1963 (address)----- 201
	cybernetics and control of economy, USSR study----- 17627
	cybernetics and economics, USSR study----- 14205
	data gap, problems in overcoming (address)----- 18752
	do you know your economic ABC's? explanation of gross national product and how it mirrors our economy----- 13346
	economic change and analysis----- 19205
	economic reports----- 146, 1859-62
	effectiveness of capital investment in irrigation construction, USSR study----- 8879
	health series----- 5685, 14663
	indices, comparison of USSR and USA, conference reports----- 17663
	knowledge and Government responsibility (remarks)----- 527
	Marxist political economy and bourgeois political economy, Communist Chinese study----- 5213

# JANUARY-DECEMBER

	Entry		Entry
Economics—Continued		Eddy, John A., lunar occultations of 2 discreet radio sources, 1963-64	21029
national security, correspondence course offered by Industrial College of Armed Forces—		Eddy County, N. Mex.:	
application information—	14082, 20759	Nash Draw quadrangle, surface geology—	6549
information booklet—	19372	saline ground water in Roswell Basin, 1958-59—	8341
plans and geography of people's communes, Communist China—	6864	Edelberg, Robert, influence of cooling of adjacent areas on GSR and base resistance of an isothermal site—	20313
problems, formulation of probability, USSR study—	2560	Edelman, Sidney, legal problems of planning in metropolitan areas—	3292
research reports, survey—	11280	Eden Valley project, operations and maintenance charges, defer, report—	19030
resources, intelligent use within and by the family as contribution to national economy—	13846	Edgar, Alfred E., shell ventilation systems for potato storages—	5826
strategy and economics, USSR study—	14102	Edgar, Bart B., relief of estate—	13502
survey, aluminum fabrication in Pacific Northwest—	1201	Edgemont NE quadrangle, S. Dak., geology—	12219
United States economic system (address, French language)—	5429	Edison National Historic Site, general information—	7330
urban economic development (address)—	10306	Editorial specialists, examination announcement—	9741
USSR system—		Editors, examination announcement—	9748
coordination of research, new form—	19637	Edlyn Dzasygn asundlund (periodical):	
current developments—	29731, 20870	translations on Mongolia—	5318
structure and policy, translations—	888	Edman, Victor G., prices and marketing margins for Washington Delicious apples, etc.—	5831
947, 1093, 2609, 2624, 2677, 2915, 5161, 5217, 5260, 5271, 5295, 5317, 5359, 6768, 6803, 6856, 6939, 6990, 7011, 7048, 7105, 8491, 8555, 8597, 8646, 8827, 8861, 8943, 8953, 9005, 10427, 10460, 10495, 10541, 10563, 10615, 10629, 10653, 10711, 10727, 12287, 12312, 12386, 12566, 12612, 12663, 12702, 12745, 14088, 14101, 14185, 14239, 14384, 15668, 15775, 15827, 15860, 15913, 15941, 15991, 16024, 17663, 17741, 17774, 17940, 17965, 19459, 19477, 20765, 20800, 20816, 20858.		Edmonds, Wash.:	
vulgar factors, criticism of Marx and its realistic significance, Communist China—	5273	navigation improvements of harbor, engineer report—	
wheat program for 1964, analysis—	5847, 7585, 9593	departmental edition—	19139
world, development, important problems, USSR study—	2663	document edition—	18803
see also Production.		EDPDF, see Experimental Data Processing and Display Facility.	
Economics in National Government:		EDTA, see Acetic acid.	
Defense Dept. cost reduction program, report 1963—	17347	Education:	
space program, effecting economies, hearing—	304	achieved by teaching machines, USSR study—	12596
Economists:		achievement, prediction of success in technical training from information—	16784
career opportunities in Agriculture Department—	1686	adult—	
Chinese, differ over Engels statement that value is relation of production expense to utility—	5369	basic education act, report—	15276
examination announcement—	9764	civil defense course—	
discontinuance notice—	9751	illustrations—	20635
social scientists, chart—	1186	student manual—	11656
ECPD, see Engineer Council for Professional Development.		teacher's manual—	20643
Ecuador:		civil defense program—	12055
agricultural products, agreement—	16580	dimensions and necessities—	26629
educational data—	6327	social security explanation (reader)—	7376
industrial development law—	5064	African women educators project report—	14072
investment guaranties, agreement—	21130	agricultural migrants, selected references—	6343
living conditions—	6602	agriculture, bibliography—	388
smuggling operations and government control—	2630	around the world, information—	375, 383, 6327-29, 6331, 8164-70, 8174, 8182, 8185, 10079, 13848, 15428, 20633.
study mission report—	9863	associations, directory, 1962-63—	12057
US role in, unfavorable criticism—	2674	attainment—	
visas, nonimmigrant, issuance, agreement—	16579	population characteristics—	4586
		population of U.S., 1960—	1884
		years of school completed by age, ethnic origin, etc.—	18704
		best farm program of all (remarks)—	20278
		better school financial accounting—	19108
		biennial survey—	2144
		children in federally affected areas—	
		annual reports, 1962—	4806
		extend and amend law—	
		hearings—	11896
		report—	13607



# INDEX 1963

	Entry
Education—Continued	
children of veterans who have war-time total disability, report	15289
children, research programs, studies in progress	176, 11647
Communist China—	
class education in K'ang-Chiang Middle School	14250
party and cadre education	2080
translations	2985, 14423
Communist, of younger generation and CPSU program, USSR study	5119
comparative, studies (series)	6345, 8163, 8189, 10067, 15450, 15451
computers for education, USSR study	12654
cooperative program, Army	18548
cooperative research act, broaden, hearings	13645
cooperative research monograph series	10076
cooperative research programs, 19094-95	370
cooperative research projects, 1961	2826
Cuban schools under revolutionary control, Bulgarian study	8173
culturally deprived pupil, one who is core of dropout problem	2550
cybernetics—	
and pedagogy, USSR study	6965
approach, USSR study	10533
East German study	14346
use, USSR study	10067
Czechoslovakia	
data—	
Ceylon	375
Cuba	13848
Denmark	8165
Ecuador	6327
England and Wales	20633
Federal Republic of Germany	8164
Greece	6329
Iraq	6328
Ireland	8167
Lebanon	8166
Saudi Arabia	8168
Sudan	15428
Turkey	8169
United Arab Republic, southern region	8170
directory, 1961-62	373
directory, 1962-63	2155, 12056-57, 13843, 15427
disadvantaged children and youth, conference on teaching	15439
distributive education series	8160
Eastern Europe, Educational Materials Laboratory report	15429
education and Federal Government	18810
education briefs	8158
educational aid posters	4950-51
educational manuals	2111, 4792-93, 6309-10, 10032, 12035, 13831-832, 17342
educational media research in Far East, survey	15449
excellence and expansion, demands for world leadership (address)	9770
exceptional children and youth—	
State education agency publications	385
exchange program—	
agreement with—	
Afghanistan	20189
Argentina	21127
Austria	16608
Brazil	20180
Ceylon	16595
Colombia	7443
Iceland	16576
India	16601
Japan	20190

	Entry
Education—Continued	
exchange program—continued	
agreement with—continued	
Korea, Republic	16588
Malaya	9436
Philippines	13081
Sweden	21122
Thailand	14732
United Arab Republic	21120
American grantees, 1962, list	16572
American studies abroad, report	18374
exchange-of-persons program, report	18375
foreign scholars and visitors, income tax advice	10319
opportunities	14709
special report on American studies abroad, report	15186
State Department report, July 1, 1960-June 30, 1961	1514
State Department report to the citizen	18327
State Department, special study of effectiveness, report	9836
teacher development, 1960-61, report	2157
teaching opportunities, 1964-65	17397
expenditures, public and private, estimates for 1961-63	3330
family-life, contribution to national economy	13846
farm and nonfarm youth—	
age-grade school progress	17354, 20625
school dropout rates	19088
Federal activities coordinated with housing and welfare	12058
Federal aid to States—	
and localities and institutions of higher education, digest of laws	9929
history of legislative proposals, 1789-1962	9929
Federal assistance, deny to institutions which practice racial discrimination—	
hearings	17168
report	18908
Federal funds for education and related activities	17374
Federal Government and education—	
print additional copies, report	15235
print as House document, reports	17127, 17290
Federal Government, directory 1962-63	15427
Federal surplus personal property, acquisition	6570
Federal surplus real property, acquisition	6570
finances, State Government, reports, bibliography	5991
financial aid for students in environmental science and engineering, listing	18284
fine arts, in Soviet Union	19100
for changing world of work, report of Panel of Consultants on Vocational Education	2156, 10066, 13844-846
for home and family living	13846
for responsible role in free society facing increased automation (address)	9028
for young children, selected references, list	8162
Fulbright awards and U.S. income tax	10314, 12248
goals for community services, planning	19333
grants for research and experiments in new educational media under Public Law 85-864, title 7, program manual	17375

# JANUARY-DECEMBER

	Entry
<b>Education—Continued</b>	
guidance, counseling, and testing personnel in State Departments of Education, directory	19096
higher education directory, 1961-62	373
higher education, directory, 1962-63	12056
health, research foundation expenditures, 1960	3178
hired farm working force, education, skill level, etc., 1961	6317
impact on women (address)	9515
importance in solving employment problem (address)	9022
India, selected bibliography of books and pamphlets on	8182
Indian education (periodical)	14048
Indians, statistics, 1962	2366
indicators	3765
instructional technology, 1950-1900	6348
international, publications	8180
International Teacher Development Program, report, 1961-62	20637
Iran	8163
Japanese Ministry of Education, Research Section, survey and research work	10079
keep children in school for greater job security	12781
Latin American, current situation, legislation, 1963, hearings	17364
librarians and teachers, needs for school library administration, etc., conference proceedings	15399, 17322
materials, importation agreement—report	19117
text	20536
mentally retarded children, graduate fellowship program for leadership preparation	20514
mentally retarded, report of President's Panel	10071
migrant children, selected State programs	21074
migrant education, problems and trends	19118
migrant, general information	20639
migratory farm workers and their children, improve opportunities—	10084
hearings	10021
report	11971
money value, relationship of schooling to earning capacity	3036
motivations of youth for leaving school	19095
NASA educational publications, list	1258, 9139
national defense education act—amend—	
hearings	9930
message from the President	4720
elementary school foreign language teaching technique, development, etc., final report	20632
foreign language fellowships, postdoctoral awards, 1964-65	12069
graduate fellows, addresses, schools, and fields of study, list	10074
guidance workers certification requirements, etc.	15431
language development program, research and studies, 1962	4819
language institutes program, manual	12070
language laboratory facilities, technical guide	10072
librarian and title 3	2159
modern foreign language fellowship program	19104

	Entry
<b>Education—Continued</b>	
national defense education act—con.	
NDEA and higher education (periodical)	3954
new educational media program, news and reports	15452
projects, Sept. 2, 1958-June 30, 1962	382
science, mathematics, and foreign language instruction, Federal financial assistance, regulations	19099
guidelines	20634
student loan program—distribution of Federal funds, 1959-64	19106
including list of participating institutions, 1962-63	377, 10075
including list of participating institutions, 1963-64	17381
partial cancellation for teachers, report	20585
summary of programs administered by Education Office, report, 1961 and 1962	13861
need for comprehensive educational planning	378
neighborhoods	5453-57, 7171-77, 9036-77, 10912-921
new dimensions in higher education	6336, 8179, 17383
new directions, current and emerging issues, background papers	15622
new educational media, public school and library system, key personnel, directory	17379
new media for instruction (series)	6348, 10072, 15449
newsnotes on education around world	3968
North Vietnam, opinion on work—opportunities for students in Army Nurse Corps	1815
Poland, educational systems	6331
post-Korean veterans readjustment assistance act of 1963—	
hearings	12026
report	13761
programs needed to meet Nation's needs (remarks)	4646
public, elementary and secondary schools, staffing and constructing, aims in education, 1959-69	6349
public, international conference, recommendations	383
public school systems, directory, 1962-63	13843
public, United States progress, 1962-63	15440
publications, list	20084
publications of Education and Labor Committee, House, selected bibliography	11894
Puerto Rico, education and citizenship in public school system	11893
race with catastrophe (address)	11686
relationship to unemployment problem (address)	9026
research, cooperative program, application instructions for contracts	15424
research, Norway in 20th century	15430
role in field of aging, State leadership, conference report	20249
role in national development in political, economic and social progress	19107
role in rated effectiveness of Air Force officers in scientific and engineering assignments	4404
school life (periodical)	4170
science, programs, 1964, special projects announcement	7341

# INDEX 1963

Entry	Entry
Education—Continued	Education and Labor Committee,
scientific, effect on economy of U.S.	House:
(remarks) 9695	calendar 3833
scientific revolution, needed changes	committee prints. 9929, 11893-894, 18932
(remarks) 5951	hearings 2048,
selected references 8162,	4753, 6193, 7993-94, 9928, 9939-
17372, 17376, 19109	31, 71891-892, 11895-896,
services for families living in public	13645-646, 15707-309, 17168,
housing community 19339	18931, 18933, 20498,
shared-time educational program,	investigations and studies, authori-
proposed Federal promotion,	zation or expenses, reports 6112,
digest of relevant literature	6141, 17123, 18910
and summary of pro and con	publications with major emphasis
arguments 15400	upon education, selected bibli-
small business leadership 1448	ography 11894
sources of information on educa-	reports 7960, 11796-798, 11819,
tional media 15447	13573, 13579, 13607, 15233,
southeast Asia, bibliography 8183	15273, 15276, 18908, 18913,
Soviet, scientific and medical, de-	travel authorization, reports 7965, 9896
velopments, 1962 5399	Education Board of D.C., budget, separ-
special education-rehabilitation co-	ate from remainder of municipal
operation on prevocational pro-	govt., hearings 12014
grams for handicapped young	Education by television, see Televi-
adults, conference proceedings 20225	sion.
special, personnel in State educa-	Education Office:
tion departments 385	annual report, 1962, on administra-
special, services for handicapped	tion of laws granting Federal
children, etc. 13111	aid to schools 4806
specialist, supervisory specialist	bulletins 1962 (series) 359-361,
and officer, examination an-	4808, 6321
ouncement 4614	bulletins 1963 (series) 17364,
State governments, directory 1962-	17367, 17369-370, 17380, 17395,
63 2155	19107, 19116, 19118-119, 19121,
State records and reports series,	20631, 20645,
implementing handbook 3 8172	bulletins 1964 (series) 17384, 17397
statistics, digest 371, 17367	careers, handbook 17377
strengthen and improve quality—	circulars 365-367,
hearings 9930	2146-47, 4809-12, 6324-26, 8186,
message from the President 4720	8188, 10070, 13854, 13863, 15426,
supervision for quality education in	15432, 15448, 15450, 17362-363,
science 4828	17365, 17373, 17382, 17396,
teacher preparation, 5-year pro-	19101, 19117,
grams 13868	commissioner of education, nomina-
television—	tion of Francis Keppel, hear-
facilities act of 1962, explana-	ing 8127
tion 12062, 13849	cooperative research monograph
facilities construction, Federal	series 8181
grants, rules and regulations 14038	cooperative research program 2148
facilities program, instructional	cooperative research program con-
manual 13850	tracts, application instruc-
national policy, recommendations	tions 15424
by Educational Media Study	cooperative research projects, 1961 370
Panel 8178	cooperative research projects, 1962 20631
transmission apparatus, perform-	distributive education series 8160
ance standards 13851	education briefs 8158
trends 19334	handbook, organization and activi-
Venezuela, development 10065	ties 17377
visually handicapped child, home	information on education around
and school programs, develop-	the world 375, 383, 6327-29,
ments and trends 19121	6331, 8164-70, 8174, 8182, 8185,
war orphans educational assistance	10079, 13848, 15428, 20633,
program, approval of courses	international education, publica-
by State agencies—	tions 8180
hearings 12026	miscellaneous series 4817
law 20423	miscellany series 6335
reports 20165, 20572	new dimensions in higher educa-
Western Europe, Educational Ma-	tion 6336, 8179, 17383
terials Laboratory report 12061	official journal 4170
workers' educational attainments 16295,	pamphlet 13869
20938	progress of education in United
Yugoslavia, school system and the	States, 1962-63, report 15440
new reform 17369	publications and articles on li-
see also Business education—Col-	braries 17391
leges and universities—Core	publications on student financial
program—Distributive educa-	aids 2168
tion—Elementary education—	selected publications concerning
Extension work—High	public administration and re-
schools—Junior colleges—Mili-	lated fields 8184
tary education—Naval educa-	selected references 8162,
tion—Programmed instruc-	17372, 17376, 19109
tion—Schools—Secondary edu-	studies in comparative education 6345,
cation—Teaching—Technical	8163, 8189, 10067
education—Vocational educa-	
tion—also subjects taught.	

# JANUARY-DECEMBER

	Entry
Educational aid posters.....	4950-51
Educational associations, directory 1962-63.....	12057
Educational boards and departments: State—	
administrative level, separation of powers.....	6344
Clearinghouse Exchange of publications, elementary education personnel.....	17360-361
directory of personnel directly concerned with programs for gifted and talented.....	372
special education personnel.....	385
Educational Commission, Austrian-American, <i>see</i> Austrian-American Educational Commission.	
Educational Exchange between United States and Afghanistan, <i>see</i> Commission for Educational Exchange between United States and Afghanistan.	
Educational Exchange between United States and Colombia, <i>see</i> Commission for Educational Exchange between United States and Colombia.	
Educational Exchange between United States and Malaya, <i>see</i> Commission for Educational Exchange between United States and Malaya.	
Educational Institutions, <i>see</i> Colleges and universities—Schools.	
Educational leave, <i>see</i> Leave of absence.	
Educational Materials Laboratory: general information.....	19097
reports.....	374, 4813, 15429
Educational Media Branch, Education Office, program and publications.....	6330
Educational Media Study Panel, recommendations regarding national policy for educational television.....	8178
Educational Statistics, Advisory Committee of Users of, <i>see</i> Advisory Committee of Users of Educational Statistics.	
Educators:	
counselor, directory.....	2151
programmed instructional materials, guide, 1963.....	17384
public health, examination announcement.....	15117
<i>see also</i> Teachers.	
Edwards, George G., subsonic aerodynamic characteristics of some blunt delta configurations with 75° sweepback.....	18134
Edwards, J. J., fast reactor fuel cycle costs and temperature coefficients of reactivity for PuO <sub>2</sub> -SS and PuO <sub>2</sub> -CO <sub>2</sub> .....	18564
Edwards, Paul K., problems of small business.....	1454
Edwards, Richard, field of stones, study of art of Shen Chou, 1427-1509.....	583
Edwards County, Tex., ground water geology.....	12235
EEC, <i>see</i> European Economic Community.	
EEG, <i>see</i> Electroencephalograms—Electroencephalography.	
Eells, Walter C., sabbatical leave in American higher education, origin, etc.....	4821

	Entry
Efficiency ratings:	
performance appraisal, supervisor development program, basic course.....	4446
work team system, introduction and operation, Korean study.....	17964
Effingham, S. C., railroad accident.....	2451
Eggs:	
and egg products, definitions and standards, amendment.....	12145
commercial egg-producing farms, New Jersey, costs and returns, 1962.....	10050
dried, quantity recipes.....	7580
farm production, disposition, cash and receipts and gross income, 1961-62, by States.....	11331
foreign agriculture circulars.....	3720
futures trading and open contracts.....	3749
interior quality, recommended standards for scoring (poster).....	7535
marketing spreads, U.S. and cities—New York City, wholesale market facilities.....	8149
plants operating under inspection and grading programs, list, 3.....	11424
poultry and egg situation.....	4028
procurement and assembly, 3 Midwestern States, costs.....	2128
production, monthly, 1961-62.....	11332
production tests, records of stocks entered in performance tests in U.S. and Canada.....	1636
products, liquid, frozen, solid production.....	3611
products, present and potential use in food manufacturing industry.....	13175
shell and frozen, futures, commitments of traders.....	3530
Egypt, <i>see</i> United Arab Republic.	
Ehrlich tumors, <i>see</i> Tumors.	
Eigenfunctions:	
mathematical treatment of determining eigenvalues associated with partition function of atom in interior of plasma.....	20977
tables of eigenvalues and eigenvectors of Hamiltonian describing combined static magnetic dipole and electric quadrupole interaction of nuclear level.....	138
Eigenfunctions, <i>see</i> Eigenfunctions.	
Eigenvalues, <i>see</i> Eigenfunctions.	
Eisenhart, Churchill, tables describing small-sample properties of mean, median, standard deviation and other statistics in sampling from various distributions.....	14601
Eisenman, Harry J., history of mathematical statistical research at Aeronautical Research Laboratories.....	4400
Eitel, Van E., farm mortgages recorded.....	17355
Ejectors:	
aircraft cooling, having short cylindrical shrouds, performance characteristics.....	10972
divergent, off-design performance.....	5529
divergent-shroud aircraft, performance characteristics.....	10974
exhaust nozzles, thrust and pumping characteristics.....	5516
gas, divergent-shroud aircraft ejectors, performance.....	5519
variable-geometry, for hot and cold primary flow pumping characteristics.....	5514

# INDEX 1963

	Entry		Entry
Eksperimental'naya khirurgiya i anesteziologiya (periodical): translations.....	658, 2527	Electric arc:	
Elastic strain, <i>see</i> Strains and stresses.		profile of arc column.....	9594
Elasticity:		spectrometric measurements of gas temperatures in arc-heated jets and tunnels.....	20987
solla, determined by field vibratory techniques, procedures.....	13883	Electric batteries:	
stress-relief cores, biaxial device for determination.....	3086	dry cell, current industrial reports.....	15063
Elastomers:		fuel cell—	
materials, use in aerospace systems, design data handbook.....	4391	carbon electrode properties, experimental.....	4393
surface friction, reducing, studies.....	18246	status report.....	9380
Elbrus region, USSR, atmospheric electric measures.....	20896	impedance of commercial Leclanché dry cells and batteries.....	14600
El Centro, Calif., joint parachute test facility, USAF 6511th test group (parachute) and US naval parachute facility, description.....	12036	manufacture, employees earnings, Jan. 1962.....	3041
Elder, James L., technology and use of lignite.....	12825	nickel-cadmium.....	7588
Elder, John H., jr., soil survey report, Northumberland and Lancaster Counties, Va.....	13058	<i>see also</i> Storage batteries.	
Elderly people, <i>see</i> Aged.		Electric bridges:	
Eleanor Roosevelt Memorial Foundation:		NRL thermistor-bridge gas leak detector and its sensitivity.....	3232
incorporate—		precision guarded Wheatstone, calibration technique.....	9287
law.....	9807	thermistor bridge for use with null balance recorders.....	6516
reports.....	6178, 7970, 8056	Electric cables:	
Elections:		fittings, Federal standard.....	13941
campaign expenditures investigation, report.....	2044	power, rubber insulated, general purpose, Federal standard.....	15512
conducted by NLRB—		thermoplastic insulated, general purpose, Federal standard.....	6446
employee representation reports.....	3935	voice-frequency loading for trunk cables.....	3315
glossary.....	18200	Electric circuits:	
information to voters.....	3180	block circuits and theory of sequences, Soviet reports.....	5378
electoral college, reform or abolition, hearings.....	17318	electrical and electronic symbols, military standard.....	17348
investigation, expenses, report.....	6268	simultaneous recording of millivolt and thermocouple outputs.....	6517, 17505
President and Vice President, financing transition period between administrations—		Electric conductivity:	
hearing.....	9937	influence of sector ground screen on field of vertical antenna.....	11097
reports.....	9914, 15238	local soil conductivity, distribution on USSR territory, USSR study.....	19730
presidential campaign, 1964, suspend equal time requirements of communications act—		method for sintering of oxides, USSR study.....	8709
hearings.....	9940, 17307	super conductivity among elements, alloys, and compounds, rules for occurrence.....	18306
reports.....	11820, 11843	Electric conductors, bibliography of electrically exploded conductor phenomenon.....	5854
<i>see also</i> Contested elections.		<i>see also</i> Semiconductors.	
Electric analog of 3-dimensional flow to wells and its application to unconfined aquifers.....	2353	Electric conduits, flexible metal, fittings, Federal standard.....	13941
Electric apparatus and appliances:		Electric contacts, wear resistance, USSR investigations.....	10627
alloys of rare metals with boron and silicon, applications, USSR study.....	6832	Electric current converters, volt-ampere, calibration.....	11102
equipment components, Federal item identification guides for supply cataloging, supplements.....	3656	Electric currents:	
hospital, list.....	14666	ac or dc (60 cps), indicating instruments, Navy calibration program, technical manual.....	16467
USSR electrical appliances, power consumption, etc.....	17919	application during zone refining.....	4424
USSR industrial development, translations.....	750,	electric current abroad, tabulation.....	15646
966, 1003, 1053, 2589, 2896, 2944,		Electric energy, <i>see</i> Electricity.	
5179, 8526, 8552, 8595, 8612,		Electric engineering:	
8627, 8684, 8828, 8918, 8975,		abstracts pertaining to Communist China in Soviet abstracts journal.....	1032, 8655, 12726, 14377
10679, 10716, 10802, 10814,		Hungary, achievements of Budapest University.....	6913
12416, 12549, 12648, 14124,		Soviet and Chinese articles, English abstracts.....	3625
14168, 14210, 14264, 14302,		Yards and Docks Bureau design manual, change.....	1598
14359, 14372, 14411, 15727,		Electric equipment, <i>see</i> Electric apparatus and appliances.	
15756, 15886, 15894, 16017,			
16079, 16128, 16217, 17588,			
17594, 17632, 17652, 17742,			
17760, 17875, 17889, 17960,			
19437, 19719.			
<i>see also</i> names of special apparatus and appliances.			



# JANUARY-DECEMBER

	Entry
Electric fans:	
circulating, bracket and desk type, Federal standards	12126
circulating, column, rigid blades, non-oscillating, Federal standard	13940
Electric fields:	
directional correlation attenuation coefficient tables for combined magnetic dipole and randomly oriented electric quadrupole interactions, spin of intermediate nuclear state	
1-1 and 1-2	7712
1-3/2 and 1-5/2	7713
ionization method modification for continuously recording contact potential differences	18248
Electric furnaces:	
smelting high-iron manganiferous materials for producing ferro-manganese	10958
smelting offgrade domestic manganese ores and concentrates	3078
Electric gages, BRL shock tube piezo-electric blast gages	9311
Electric generators:	
coupled disk dynamos, paleomagnetic type, field reversals	11189
generator industry, outlook for 1963 and review of 1962	4517
magnetohydrodynamic—optimizing operation, USSR study	6894
vortex type	18161
marine self-exciting synchronous generators, USSR study	5144
measurements and instrumentations, standardization handbook	344
nuclear cells that use cerium 144 beta-emitting radioisotope sources, analysis	21003
sets, engine drive, tests and inspection, military standard	20623
unnecessary procurement by Army Department, GAO review	6541
see also Pulse generators—Signal generators—Thermoelectricity.	
Electric insulation, see Insulation.	
Electric lamps:	
current industrial reports	7753
fluorescent, ballasts, current industrial reports	3575, 5995
low-pressure mercury arc for ultraviolet calibration	21023
production, current industrial reports	3575
shipments, current industrial reports	3574
supply management within Defense Department, GAO review	8323
Electric lighting, see Electricity.	
Electric lines:	
AC power transmission lines for 1500-3000 KM, USSR study	6942
construction, specifications and drawings for transmission voltages	11257, 11259, 14683
installation and maintenance of electric supply and communication lines, safety rules, errata	9202
multi-grounded rural, relieving underground corrosion	14684
rural lines (periodical)	4161
specifications and drawings, line construction	14685
transmission construction contract, labor and materials	1441, 14683
tropospheric communication circuits, equipment characteristics and their relation to system performance	3176

	Entry
Electric measurements:	
atmospheric, in Elbrus region, USSR study	20896
microvoltages	9276
Electric measuring instruments, fiber length determination of cotton by electrical resistance measurements	7573
Electric meters:	
DC or AC voltage or current indicating instruments, Navy calibration instruments	18261
Hewlett-Packard 434A calorimetric power meter, Navy calibration program, technical manual	18259
RF wattmeters, single-ended 0 to 50 watts, Navy calibration program, technical manual	18260
wave and power meter set, TS-107A/TPM-1, Navy calibration program technical manual	9294
Electric motors, industry, outlook for 1963 and review of 1962	4517
Electric networks:	
distributing, calculation with aid of Minsk digital computer, USSR study	14196
rural, linear programming in study, USSR	6812
Electric plants, see Electric power plants.	
Electric power, see Electricity.	
Electric power distribution, see Electricity.	
Electric power plants:	
controlling power system under emergency conditions, application of propositions of cybernetics, USSR study	17777
hydroelectric—construction cost and production expenses	13915
corrosion and epibiosis of under water metal structures, USSR study	10813
Kremenchugskaya station, USSR study	10825
station structures, mollusk overgrowth, USSR study	10774
USSR plants—print as Senate document, report	13765
USSR, Vakhsh River, projects	5333
solar stations, USSR study	2519
steam-electric plants, construction costs and production expenses	2265
Electric propulsion for spacecraft, papers	5550
Electric railroads:	
first AC line, Communist China study	2611
transport statistics, 1961	641
Electric relays, relays and industrial controls, 1961, current industrial reports	15070
Electric resistance:	
fiber length determination of cotton by electrical resistance measurements	7573
glacier ice near Thule, Greenland, electrical D-C resistivity measurements	4843
transverse magnetoresistance of aluminum	18254
well logging, application to groundwater hydrology	14028
Electric resistors:	
carbon resistors for cryogenic liquid level measurement	21030
semiconductor resistive element, report	13041

# INDEX 1963

Entry	Entry
Electric resolvers, applications of electrical resolvers, military standardization handbook-----	346
Electric shock:-----	5432
hazards, control-----	9039
much-misunderstood hazard-----	6696
Electric sounding by method of extraction of fields, USSR study-----	6696
Electric switchgear:-----	
astronomic time switches and photoelectric devices for airways lighting, maintenance-----	12095
current industrial reports-----	15070
master switch requirements, civil air regulations amdt-----	2243, 2245
threshold techniques for digital computers-----	5851
Electric transformers:-----	
power, distribution and specialty industry, outlook for 1963 and review of 1962-----	4515
power, distribution, Federal standard-----	15510
Electric units systems, errata-----	7311
Electric utilities:-----	
industry wage survey-----	19793
statistics, 1960, classes A and B privately owned companies-----	4902
Electric waves:-----	
diffraction of electromagnetic waves in plane metal grating with screen, USSR study-----	19631
electromagnetic scattering on uneven surfaces, USSR study-----	6641
electromagnetic shock tube for generating strong shocks in air, evaluation-----	19925
interaction of waves in waveguide systems with long electron flows, nonlinear effects and parametric regeneration, USSR study-----	10752
Electric wire and wiring:-----	
devices and supplies, current industrial reports-----	13298
Federal item identification guides for supply cataloging, supplements-----	3656
Podolsk microwire plant, USSR-----	2781
rubber insulated wire, general purpose, Federal standard-----	15512
thermoplastic insulated, general purpose, Federal standard-----	6446
underwater shock waves formed by exploding wires-----	18242
Electrical. <i>see</i> headings beginning Electric.	
Electricians, interior communications and chief, Navy training courses-----	9268
Electricity:-----	
all-electric homes, annual bills-----	19192
alternating-current supplies, operation of electron-bombardment ion rocket-----	1286
Amistad Dam project, market power generated, reports-----	11804, 11999
Bonneville Power Administration, define marketing area-----	13656
hearings-----	8072, 15245, 17117
reports-----	7722, 18612
Bonneville power generation and sales statistics-----	10831
Communist China-----	914
electric power-----	
power industry-----	
consumption in low-rent housing projects, PHA, unnecessary equipment for measuring, GAO report-----	12205
electric power statistics-----	3612
electrical systems, interior, emergency construction, engineering and design manual-----	17409
Electricity--Continued	
fuels and energy used by industry groups, annual survey of manufactures, 1961-----	4572
fundamentals for aircraft maintenance, Air Force manual-----	1743
Hanford new production reactor, proposed arrangements for electric generating facilities, hearing-----	1969
hydroelectric power, pumped storage, bibliography-----	7474
hydroelectric project, continue use of lands in Sequoia National Park-----	
law-----	13421
reports-----	7926, 12001
interconnections mean more power for all users-----	11255
judging your electric power needs-----	7429
magnetic and electric forces for rotating shaft suspension, investigation-----	7593
national electric rate book-----	508-515, 6406-8, 13916-922, 15492-500, 17432, 19194-199, 20672-675
naval shore activities, maintenance of electric power distribution systems-----	11419
nuclear energy development, tasks of industry, Yugoslav study-----	5193
Pacific Northwest consumers preference, hearing-----	8119
Passamaquoddy project and upper Saint John River hydroelectric power development, report by study committee-----	15633
summary-----	15634
Poland, increasing capacity, power and distribution equipment, Federal item identification guides for supply cataloging, supplement-----	2704
power for spacecraft-----	3656
power production, role of coal industry (address)-----	5549
power supply and distribution-----	10309
emergency construction, engineering and design manual-----	6371
engineering manual, change-----	431
principal electric facilities, map-----	
Alaska, Hawaii, Puerto Rico-----	523
Great Lakes region-----	517
North Central region-----	518
Northeastern region-----	516
Northwestern region-----	519
South Central region-----	521
Southeastern region-----	522
Southwestern region-----	520
United States-----	2266
publications, price list-----	16491, 21076
Rampart power market-----	2104
retail prices and indexes-----	4150
rural-----	
mapping electric systems for REA borrowers, guide-----	21102
materials acceptable on electrification systems of REA borrowers-----	3869, 5713, 16553
publications, price list-----	11225
REA distribution line extension, construction contract-----	3313
REA pattern-----	9374
rural electrification act of 1936, with amendments, text-----	3314
rural lines (periodical)-----	4161
statistical bulletin-----	3925
strength for future (addresses)-----	9375, 13038
transmission construction contract, labor and materials-----	1441
sales statistics, TVA retail distribution-----	3613
shipboard systems, Navy-----	1369

	Entry		Entry
Electricity—Continued		Electrolytes, molten salt, used for	
single power system, USSR trans-		new cathode-anode couples for	
lation -----	12314	secondary batteries, investiga-	14899
systems of units, errata -----	7311	tion -----	
TVA, municipal and cooperative		see also Polyelectrolytes.	
distributors, report, 1962 -----	5753	Electrolytic cells:	
USSR power—		fuel cells, status report -----	9380
electrical appliances, power con-		osmionic operation, theoretical	
sumption, etc. -----	17919	studies with aqueous solutions	
recent developments, U.S. delega-		of mixed electrolytes -----	14061
tion tour report -----	5048	primary and secondary theoretical	
translations -----	799, 1088, 2637, 2654,	design -----	18244
5263, 6752, 8716, 10635, 12409,		Electrolytic method of producing tan-	
12564, 15680, 17836, 19378, 20849.		talum, USSR -----	6811
vulnerability of electric power sys-		Electromagnetic fields, combined ef-	
tems to nuclear weapons -----	349	fect of high-frequency field	
see also Atmospheric electricity—		and X-ray under industrial	
Lights and lighting—Thermo-		conditions, USSR study -----	17814
electricity—also headings be-		Electromagnetic waves, see Electric	
ginning Electric and Electro.		waves.	
Electroacoustic waves, excitation by		Electromagnetism:	
antennas in ionosphere -----	12871	Czechoslovakia, translations -----	7065
Electrocardiograms, observations in		induction as basis for thunder-	
adolescence and adulthood of		storm theory, Austrian study -----	17628
influence of high altitudes on		Electrometallurgy, processing, radio-	
electric activity of heart -----	71	tracer applications -----	9125
Electrocardiographs, six-channel (6		Electrometers, use for determining ox-	
NEK-1-F2) model, descrip-		ygen content of expired air,	
tion, East German study -----	10560	USSR study -----	19446
Electrochemical cells, see Cells.		Electromyograph, use in studying bio-	
Electrochemistry, research in East		electrical activity of muscles in	
Germany and Hungary -----	7035	occupational neuro-muscular	
Electrodeposition:		diseases, USSR -----	17976
molybdenum, tungsten, and vana-		Electron beams:	
dium in organic solvents -----	19873	all-purpose laboratory device for	
zinc -----	19871	smelting and zone-refining met-	
Electrodes:		als -----	10848
carbon fuel cell properties, experi-		welding—	
mental -----	4393	fabrication of ultra high strength	
cesium-coated ion-thruster, ther-		steel rocket motor cases, eval-	
monionic emission -----	19916	uation -----	9277
design and space-charge-flow theory		its industrial potential, etc. -----	5983
for electrostatic rocket en-		role in special weldments, USSR	
gines -----	1288	study -----	8849
gold, hydrogen overvoltage, re-		techniques -----	11199
search -----	11473	Electron microscopes:	
implanting in animal for recording		carbon replicas for measuring	
nystagmus -----	7630	Knoop hardness indentations.	
processes by microscopy, investiga-		injuries occurring in objects stud-	
tion -----	7369	ied, under action of electrons,	
sheath near plane electrode bound-		USSR study -----	15782
ing collisionless plasma in		tariff treatment, report -----	4746
magnetic field -----	19936	Electron microscopy, fractographic	
silver, increasing discharge ca-		study of mechanisms of ductile	
pacitry -----	18247	rupture in metals -----	11186
Electrodynamics, large angle pair		Electron probe X-ray spectrograph,	
production -----	125	see Spectrographs.	
Electroencephalograms, human, ef-		Electron tubes:	
fects of epinephrine, atropine,		cold cathode tube application, de-	
chlorpromazine on EEG activa-		velopment, USSR study -----	8538
tion response -----	5886	Hickok 539A tester, Navy calibra-	
Electroencephalography:		tion program, technical man-	
alpha rhythm feedback control		ual -----	16468
unit -----	11180	receiving, data on, tabulation -----	12893
characteristics of appearance of		Electronic amplifiers, see Amplifiers.	
activation reaction of EEG		Electronic circuits:	
under action of light, USSR		analysis, AF manual -----	1744, 4383
study -----	20814	electrical and electronic symbols,	
hospital electroencephalographic		military standard -----	17348
suite, design, layout, etc. -----	14667	microminiaturization techniques -----	1768
new born, techniques, USSR study.		semiconductor device circuits, Navy	
Electroluminescence, use of lumines-		aeronautical equipment hand-	
cence in microbiological tests,		book, supp. -----	16465
USSR study -----	15871	transistorized building blocks for	
Electrolysis:		data instrumentation -----	9213
electrowinning molten uranium		Electronic computers:	
metal from uranium oxide,		algorithm for organization of in-	
technical feasibility -----	10959	formation, USSR study -----	2037
fused salt, of tungsten, experi-		algorithm for solving large systems	
ments -----	5481	of normal equations by means	
production of rhenium powder,		of multigroup method, USSR	
USSR experiment -----	7000	study -----	1085
titanium electrorefining, electro-			
lytic methods of preparing cell			
feed -----	5488		

# INDEX 1963

	Entry		Entry
Electronic computers—Continued		Electronic computers—Continued	
analog—		IBM 704 and 7090, X-ray diffrac-	
calculation of resistance and er-		tion data reduction program,	
ror of steady flow through non-		addenda.....	9273
homogeneous aquifers.....	5032	IBM 704 or 7090 computer program	
excessive costs to Government for		for computation of chemical	
leasing instead of purchasing		equilibrium compositions, rock-	
for use under defense con-		et performance, and Chapman-	
tracts by Martin Marietta Cor-		Jouguet detonations.....	7247, 19909
poration, Defense Dept., GAO		industry outlook for 1963 and re-	
report.....	19280	view of 1962.....	1862
NS Savannah upgrading analy-		linear programming—	
sis.....	5924	bibliography.....	18627
quickenning demonstration, de-		establishing labor norms, USSR	
sign.....	11156	study.....	8715
synthesis method of higher order		problems, USSR study.....	19746
functions.....	11171	study of rural electrical network,	
use in extremal problems, USSR		USSR.....	6812
study.....	12334	mathematical data, inconsistent re-	
applications to nuclear and radio-		sponse patterns, chance distri-	
chemistry.....	9681	bution in paired comparison	
automata with programmed con-		and multiple ranking designs..	7625
trol, optimal operating condi-		mathematical simulation, retention	
tions, USSR study.....	10708	of 1st enlistment airmen, anal-	
automatic control theory, USSR		ysis of results.....	1772
study.....	8486	modeling differential equations	
automatic programming device for		with boundary conditions, Ukr	
investigating motor defensive		SSR study.....	12653
conditioned reflexes, USSR		motor transport planning, USSR	
study.....	2801	study.....	17864
automation of—		NAREC program for least square	
blast furnace processes by means		error curve fitting.....	3230
of computers, USSR study.....	887	numerical analysis of nuclear elec-	
calculations and development of		trogenerator cells that use	
computer engineering, USSR		cerium 144 beta-emitting ra-	
study.....	5240	diotope sources.....	21003
production processes, USSR		organization and application in	
study.....	939	coding and machine transla-	
Bendix DA-1 digital differential		tion, USSR studies.....	17802
analyzer methods of generat-		PERT system—	
ing functions.....	3233	NASA-PERT B computer systems	
bi-directional updating equipment		manual.....	14543
(CUE), test and evaluation..	5751	network analysis system, ER reg-	
digital—		ulation.....	13881
analysis of statically indeter-		Polaris management.....	3238
minate structures applicable		phototypesetting output, example	
to airframe design.....	1317	using tabular data.....	14599
calculation of distributing net-		programed education, USSR study..	12654
works with aid of Minsk ma-		programed materials in mathe-	
chine, USSR.....	14196	matics.....	2172
COBOL, common business orien-		programming—	
ted language for program-		address language, USSR study..	6979
ming, extended specifications..	2113	bibliography.....	18628
coding of hydrogen properties for		glossary for NAREC users.....	11155
application to heat transfer		programs—	
and fluid-flow computations....	12854	calculating neutron interaction	
ore grade and tonnage factors....	19804	between cylindrical storage	
ore reserves computed by trian-		containers.....	11557
gular method.....	7213	gravity model trip distribution	
probabilities associated with F		formula for any size urban	
statistic, estimation tech-		area.....	14679
niques.....	16783	library.....	9364
pump impellers, method for de-		quality typography from computer	
sign.....	3150	data.....	16480
recognition of visual images,		scientific conference on learning	
USSR study.....	8485	automatic machines and infor-	
teaching to assist in making de-		mation processing in orga-	
cisions.....	11512	nisms, West Germany.....	7071
threshold switching techniques..	5851	seasonal adjustments, Census Bu-	
use, USSR.....	712	reau's methods, tests and re-	
digital-to-analog, diode conversion		visions.....	16906
technique.....	18230	self-learning systems, principles of	
electronic conversationalist, USSR		design, USSR study.....	8540
study.....	2540	simulation of Alpha system with	
engineering problems, USSR stud-		positive feedback loop, USSR	
ies.....	1016	experiments.....	19678
foreign developments, translations,		technology in national economy,	
information technology.....	19748	USSR study.....	19439
graphics, use in community re-		turing machines, problems in using,	
newal, manual for profes-		USSR study.....	8603
sionals in urban analysis and		UDOFIT mathematical procedures..	7366
related fields.....	14764		

	Entry	Entry	
	Electronic computers—Continued	Electronic data processing systems—Con.	
73	UNIVAC file computer 1, basic logic for air traffic control/automatic data processing system, description	unnecessary costs because Navy failed to purchase leased components offered at reduced prices, GAO report.....	12216
9	use for calculation of construction schedules and priorities, USSR	use in Federal Government—	
32	use for earthquake epicenter determination, USSR study	hearings	15329, 17182
27	use in mills for laying out without waste, USSR study	interim report.....	15265
15	see also Cybernetics.	inventory	20503
46	Electronic conversationalist, USSR	report	18912
12	Electronic counters, plotting erythrocyte volume spectra, calibration	using computer graphics in community renewal, manual for professionals in urban analysis and related fields.....	14764
25	Electronic data processing systems: automatic data processing telemetry signals from satellites	USSR research.....	17602
72	bibliography	Electronic equipment:	
53	central facility for recording and processing transient-type data	components, Federal item identification guides for supply cataloging, supplements.....	3656
64	control lines maintenance, FAA handbook	hospital, list.....	14666
30	coordination by GSA for economic and efficient purchase, etc., by Govt. offices—	manufacturing, employment outlook, etc.....	20928
3	hearing	miniature parts, handbook.....	3320
2	reports	Navy aeronautical, preferred circuits handbook, supp.....	16165
43	curriculum, post high school	new, for printing industry.....	826
38	EDPDF functional description	reliability and quality control, bibliography	18626
99	effectiveness in streamflow records computations, evaluation	reliability stress and failure rate data	345
54	equipment, Federal Government, financial advantages of purchasing over leasing, GAO study	shipboard, maintainability design criteria handbook for designers	1443
72	equipment, Federal item identification guides for supply cataloging, supplement	Soviet devices, tabulation of data—	12903
81	excessive cost of leasing as compared with buying by Air Force Dept., GAO review	standard general requirements, military standard	2116
90	Fortran programs—	trouble-shooting, self-study textbook	9270, 11150
54	analysis of radioactive decay curves, errata	workmanship and design practices	5660
72	code for solution of problems in space by numerical methods, N-body code	see also special types of equipment.	
79	crystal structure analysis	Electronic machine helps shop, USSR	5385
28	NDC, nuclear design calculations for rod-clustered pressure-tube lattices	Electronic measuring instruments, Soviet patents on acoustical and magnetic measuring instruments	676
55	glossary	Electronic Systems Division, technical documentary reports	58, 1769-70, 9614-15, 11507, 14914, 18486-487.
57	installation at Hines, Ill., Department of Veterans Benefits, GAO report	Electronic warfare principles.....	51
379	Kansas City and Evanston agricultural commodity offices, inadequacies in planning, etc., GAO review	Electronics:	
364	long distance transmission of information, East German study	abstracts pertaining to Communist China in Soviet journals.....	12546, 14377
480	mathematics and data processing, Rumanian study	broad road to industry, USSR study	10517
71	NAREC program for lease square error curve fitting	circuit analysis, AF manual.....	1744, 4383
906	overpayment of rentals by Goddard Space Flight Center, NASA, GAO report	East European journals abstracts	734, 922, 1069, 2646, 2728, 2876, 2928, 5384, 5420, 6714, 6880, 8523, 8586, 8688, 8779, 8884, 10420, 10534, 10606, 10713, 10793, 12305, 12669, 12687, 14110, 14326, 14412, 15745, 15884, 16139, 16204, 16220, 17780, 17857, 17914, 17990, 19613, 19648, 19706, 19760, 20874, 20888.
540	processing operations, Chicago Regional Disbursing Office, Accounts Bureau, Treas. Dept., GAO review	fundamentals, Air Force manual, change	5866
378	programming course, prediction of success	industries, outlook for 1963 and review of 1962	5980
439	range vegetation information	industry, management problems	1486
603	transistorized building blocks for data instrumentation	medicine and electronics, USSR study	17910
366	UNIVAC file computer 1 basic logic for air traffic control, description	microelectronics, conference on Navy laboratory program	9271
		modelling, Ukrainian SSR study	12653
		publications, price list	16491, 21076
		Soviet and Chinese articles, English abstracts	3625



# INDEX 1963

Entry	Entry
Electronics—Continued	Electroslag:
spare parts, overpricing under	refining, role in special weldments,
Army Dept. fixed-price con-	USSR study-----
tracts with Burroughs Cor-	remelting method for steel produc-
poration, GAO review-----	tion, USSR study-----
8316	remelting, USSR conference-----
techniques of physiological moni-	smelting of titanium ingots,
toring, fundamentals-----	USSR-----
20301	welding applications, USSR study-----
USSR developments, translations--	3003
USSR scientific abstracts-----	Electrostatic fields, impressed, effects
14106,	on salt water/air interface-----
15949, 17809, 19682	5050
USSR translations-----	Electrostatic separation, granular
10380	materials-----
see also Bioelectronics—Electronic	7202
equipment—also subjects for	Electrostatics:
which electronics are used.	aircraft protection, optimum num-
Electrons:	ber, etc., of static dischargers-----
affinities for molecules found in	20297
high-temperature chemical re-	arctic clothing, accumulation of
actions, tabulated values-----	static electricity-----
12874	static electricity, detection, control,
application of method of partial	etc., in industry-----
separation of variables to 2	12780
equivalent p-electrons-----	Electrowinning, see Electrolysis.
11083	Elementary education:
bombardment, deposition of vacuum	aeronautics and space bibliography--
coatings-----	19884
18180	city schools, conference report-----
bombardment ion rocket operated	19098
with alternating-current sup-	Clearinghouse Exchange of publica-
plies-----	tions of State departments of
1286	education-----
bombardment ion thrusters, screen	17360
and accelerator grids for,	enrollment, teachers and school-
studies-----	housing, fall 1962, statistics-----
16363	10070
crystals, electron theory research--	evaluating elementary schools,
7688	selected references-----
density distribution in upper F-	17372
region-----	foreign language teachers with in-
9181	adequate knowledge, technique
density of ionospheric wavemotions	evaluation, etc., final report-----
caused by nuclear detonations--	20632
13198	foreign languages, references-----
density over magnetic equator ob-	12079
tained using incoherent scatter	grants for instructional research,
technique-----	hearings-----
7312	13645
density variations of quiet iono-	grouping children, research and im-
sphere-----	plications, selected references-----
11098-99, 19952	17376
during sudden commencement of	guidance for children-----
magnetic storm on Sept. 30,	13852
1961, observation at 12 earth	guidance in elementary school-----
radial-----	376
9175	improve quality, hearings-----
electron-hydrogen scattering, non-	13645
adiabatic theory-----	mathematics instruction, new di-
14550	rections-----
energy deposition on thin-film poly-	mathematics library, recent titles,
meric materials, calculation--	selected bibliography-----
19938	358
excitation of electroacoustic waves	personnel, summer institutes, 1963--
in ionosphere-----	3197
12871	public, staffing and constructing ele-
high-energy, in radiation belt-----	mentary schools, aims in edu-
21024	cation, 1959-69-----
hydrogen phase shifts just below	6349
inelastic threshold-----	publications, list-----
12861, 18138	20084
injection into annular machines--	research in reading, primary level,
5936,	bibliography-----
7699	19116
interaction of electrons and posi-	school libraries, bibliography-----
trons at high energies, USSR	4814
study-----	social studies, unit planning and
7055	teaching-----
intermolecular electron transfer in	teachers, amend national defense
tetrapyrrole pigments during	education act to permit partial
pulsed illumination, USSR	cancellation of student loans,
study-----	report-----
20811	20585
ion sheath effects near antennas	Elementary forest sampling-----
radiating within ionosphere--	1681
11049	Elements (chemical), see Chemical
longitudinal oscillations in thermal	elements.
plasmas, dispersion and damp-	Eliminating radiostrontium from or-
ing factors-----	ganism, USSR-----
12867	Elizabethton, Tenn., area, geology and
optical studies of low-pressure	ground water resources-----
gases-----	5025
outer radiation belt, energy spec-	Elk, use of natural openings in Ari-
trum-----	zona pine forest-----
7289	Elk County, Pa., coal carbonizing
range-energy relations in Al, Si,	properties-----
and SiO <sub>2</sub> -----	18333
temperature in ionosphere--	Elk River, nuclear-reactor site, geology
18122, 19892	and hydrology-----
transmission and reflection by	14016
aluminum foils-----	Elkind, Jerome I., determining time-
9217	invariant and time-variant dy-
Electrophoresis, trimetallic film pre-	namic characteristics of human
paration by electrophoretic	pilots-----
deposition-----	11078
Electrophotometers, aurorae and air-	Elko County, Nev., Railroad mining
glow researches-----	district, geology-----
3165	17527
Electrophysiology, see Physiology.	Ellard, J. A., organic coolants essen-
Electrophysiology, theory-----	tial data, 4th quarterly report,
11084	Jan. 1-Mar. 30, 1962-----
Electrorefining, see Smelting.	5934

	Entry
Ellender, Allen J., report on United States foreign operations in Africa	8021
Ellicott City, Md., aircraft accident	7773
Elliott, Lois L.: hearing of Air Force pilots, 1955-62	4417
prediction of speech discrimination scores	4423
reliability of skin tests for nasal allergy, etc.	7632
Ellipsoids, rotation, arbitrary normal section, USSR study	10405
Ellis, A. B., microminiaturized instrumentation package	5858
Ellis, Charlotte, hospital insurance coverage of aged beneficiaries	9304
Ellis, James P., Jr.: blood lactate analysis	16806
detection of in-flight hyperventilation by blood and urine analyses	5891
Ellis Island, New York Harbor, disposal, hearings	6299
Elmer, Elizabeth, identification of abused children	20365
Elmhurst, Ill., population, special census	9725
Elmira, N.Y., surficial geology and soils of region	19313
El Morro National Monument, general information	1350
El Paso, Tex., International Airport, weather observations, hourly, decennial census	11403
El Salvador, <i>see</i> Salvador	
Elsner, Robert W., thermal and metabolic responses to cold of Peruvian Indians	18478
Elson, Jo A., abstracts of Personnel Research Laboratory, 1962	7624
Elterman, Louis, model of clear standard atmosphere for attenuation in visible region and infrared windows	20302
Ely, Nev., grazing district, hydrology of stock-water development	5026
EM series	427-434, 2209-11, 4859-65, 6369-74, 8196, 10085-88, 12088-91, 13878-879, 17408-410, 19142-144
Emancipation Proclamation: America is for everybody, commemoration of 100th anniversary	4831
5-cent commemorative postage stamp (poster)	14643
Embassies, <i>see</i> Foreign service	
Embezzlement, criminological analysis of documents, USSR study	8914
Embolism, gas and fat, pathogenic mechanisms	5885
Embree, Ruth G., PACAF (Pacific Air Forces) basic bibliographies for base libraries: Pacific area	62
Embryology: afferent and effector innervation of somatic musculature development, USSR study	19717
gypsy moth fully developed embryos, determining sex	10233
immunology of embryogenesis, USSR study	954
modern, problems, USSR studies	921
<i>see also</i> Space embryology	
Embryos, higher nervous system of progeny, effects of ionizing radiation on functions	14957
Emergencies, <i>see</i> Disasters	
Emergency boards: maritime emergency dispute boards, appointment, hearings	9942-43, 15323

	Entry
Emergency boards—Continued reports	
Belt Railway Company of Chicago	8190
Eastern, Western, and Southeastern Carriers' Conference Committee	12082
Railway Express Agency, Inc.	391
Southern Pacific Company (Pacific Lines)	6351
Emergency health care, family guide	4605
Emergency Planning Office: appropriations, 1964, hearings	18919
comprehensive program for survival of Government and management of resources (address)	392
Government information plans and policies, hearing	17169
information bulletin	3788
manganese stockpiling program, GAO review	10263
preparedness program, Executive orders prescribing responsibilities	13872
press releases	4046
sundry nominations, hearings	2090
Emergency Transportation Office: focal point for mobilization of Nation's civil transportation resources (remarks)	9791
responsibilities, etc. (remarks)	13380
Emerson, Lynn A., technical training in U.S.	13844
Emerson, T. E., development of reversible hematuria and oliguria following elevation of renal venous pressure	7721
Emery, James C., transonic compressor cascade and test results for 4 blade sections	10999
Emery, K. O., Atlantic Continental Shelf and slope, program for study	19307
Eminent domain, progress, property and just compensation	10882
Emission: airglow, Lord Rayleigh's data, re-examination	16771
field-ion emission, applying to electrostatic rocket engines	5585
<i>see also</i> Thermionic emission	
Emissivity, radiant energy, angular distribution from gray asymmetric grooves	20902
<i>see also</i> Radiation	
Emitance: hemispherical, effects of sputtering with hydrogen ions on total hemispherical emitance of metallic surfaces	5598
thermal of spacecraft coatings, dynamic thermal vacuum, technique for measuring	9179, 18137
Employee appraisal, <i>see</i> Efficiency ratings	
Employee benefit plans: amend Davis-Bacon act to include fringe benefits in prevailing wages	
hearings	11892
report	11796
code of Federal regulations	4908
experience, 1961	7430
supplemental unemployment benefits, digest	16289
welfare and pension plans disclosure act, amendments 1962, legislative history	5723
Employee development officer, examination announcement	16940

# INDEX 1963

	Entry		Entry
Employee training:		Employment—Continued	
Army Department, supervisor's		assistance for workers under trade	
guide to job instruction, civilian		expansion act of 1962	3013
personnel pamphlet	18541	attracting new industry	7656
on the job, under manpower develop-		benchmarks for BLS payroll em-	
ment and training act	18539	ployment statistics, 1959	5458
staff development, supervisor's job	17539	building jobs, SBA's role in area	
see also Apprentices.		redevelopment	9381
Employees:		building trades skilled, mid-1960	1187
earnings in nonmetropolitan areas		certificates for learners, hand-	
of central States, June 1962	14480	capped persons, etc., annul-	
earnings, retail trade		ment or withdrawal under fair	
building materials, hardware, and		labor standards act	18366
farm equipment deals		changing occupational patterns in	
departmental edition	3025	railroad industry, 1947-60	
document edition	2009	departmental edition	9053
drug and proprietary stores		document edition	7836
departmental edition	3031	city, 1962	6005
document edition	2015	coal mines, monthly report	3519
food and grocery stores		coal mining injury experience, re-	
departmental edition	3027	lated data analysis	1207
document edition	2011	college graduates, 1958, report of	
furniture, home furnishings, and		1960 survey	16448
household appliance stores		community program, developments	
departmental edition	3030	in 1961	394
document edition	2014	demonstration manpower programs,	
Industry group by occupation cen-		general information	19781
sus of population, 1960	155	dual compensation-dual employ-	
occupational health services, guide		ment laws, modernize, hear-	
for State and local govern-		ings	17181
ments	18287	durable goods manufacturing,	
recognition, supervisor development		trends	14482
program, basic course	4447	economic indicators relating to	
see also Government officials and		equal pay, 1963	20255
employees—Railroad employ-		effects of proposed quality stabili-	
ees—also names of depart-		zation act, summary analysis	20449
ments, etc., where employed.		electronics manufacturing outlook	20928
Employees' Compensation Appeals		employment and earnings (periodi-	
Board, decisions, July 1, 1961-		cal)	3614
June 30, 1962	4830	employment and unemployment,	
Employers:		statistics, measuring, hearings	13440
entering collective bargaining rela-		employment situation, monthly re-	
tionship for 1st time, informa-		lease	3618
tion (address)	11113	equal employment opportunity—	
expenditures for supplementary re-		act of 1963—	
muneration practices for pro-		hearings	17323, 18951
duction workers in mining in-		report	15233
dustries, 1960—		Federal contracts, rules and	
departmental edition	10895	regulations of President's Com-	
document edition	9816	mittee on Equal Employment	
expenditures for supplementary re-		Opportunity	20079
muneration practices in fi-		Federal Government, rules and	
nance, insurance, and real		regulations by President's Com-	
estate industries, 1961	18044	mittee on Equal Employment	
household workers, social security		Opportunity	3259, 14648
tax guide	626	for all qualified persons (ad-	
procedures in work force adjust-		dress)	19775
ments to technological change	6353	goal of President's Committee on	
records kept under fair labor stand-		Equal Employment Opportu-	
ards act—		nity	12973
general requirements	5767	investigations and compliance	
miscellaneous exemptions, etc.	5768	reviews, guide	1389
reporting requirements under labor-		Post Office Department	11207
management reporting and dis-		President's Committee, general	
closure act	12777	information	20077
Employers' Liability and workmen's		USDA progress, pictorial re-	
compensation:		view	18266
longshoremen's and harbor work-		expand opportunities through re-	
ers' compensation act—		vision of tax structure (ad-	
as extended, text	393	dress)	19778
hints for employers reporting		farm labor, employment and wage	
injuries	16270	supplement	3642-43
medical rehabilitation of injured		farmers, self-employed, are you get-	
workers	3019	ting your social security	
payments and costs, 1961	1501	credit?	1376
problems, 1962	12778	Federal—	
publications list	12980	Federal employment statistics	
rehabilitating disabled worker	20224	bulletin	3648
Employment:		graphic presentation	9752
aliens in scientific or technical		jobs overseas	4627
capacity, report	13753	monthly report	3920
area labor supply classifications	19123	publications providing useful in-	
area redevelopment approach to		formation	11228
creating jobs (remarks)	18531		

# JANUARY-DECEMBER

	Entry
Employment—Continued	
Federal—Continued	
summer, of college students in	
Federal Government, 1961—	9954
print as Senate document, re-	
port—	6282
summer, opportunities, etc—	4628
summer, veterinarian trainee, ex-	
amination announcement—	20385
thinking about your first job?	
try Uncle Sam—	9754
travel costs for applicants, hear-	
ing—	15312
way to job in Government—	4629
workers for U.S.A.—	9753
Forest Service jobs, nonprofes-	
sional—	13177
fuel industries, minerals yearbook	
chapter—	19829
Government employment series—	6005,
	9728
handicapped persons, code of Fed-	
eral regulations—	16653
hospital administrators, outlook—	20933
implication of automation and re-	
lated technological change	
(address)—	3012
importance of education (address)—	9022
Indians, adult, amend act, report—	17260
industry, growth since World War	
II—	16267
job dislocations caused by changes	
in technology (address)—	19776
job finding, help for disabled	
through vocational rehabilita-	
tion—	9484
keep children in school for greater	
job security—	12781
labor force and employment, 1960-	
42—	16296
learners, code of Federal regula-	
tions—	16651
manpower program needed for fu-	
ture economic stability (ad-	
dress)—	19780
manpower resources of nation,	
training and utilization, hear-	
ings—	17327,
manpower utilization problems, peo-	
ple, skills and jobs—	20924
mentally retarded—	
conference proceedings—	3395
guide to job placement—	14448
messengers, under fair labor stand-	
ards act, code of Federal regu-	
lations—	16652
metal and nonmetal industries,	
minerals yearbook chapter—	19830
mineral industries, minerals year-	
book chapter—	1200,
multiple jobholders, May 1962—	16294
national program, training and ed-	
ucation of workers, young and	
old (address)—	3014
Negro youth, preparation and moti-	
vation, Labor Department	
sponsored conferences with col-	
lege presidents and execu-	
tives—	5430, 14443,
oceanographers, outlook—	9065
Federal mediator positions—	12113
mechanics and repairmen—	20937
missile and spacecraft manufactur-	
ing—	3039
Naval Weapons Bureau—	3616
Public Health Service—	12984
women in business (address)—	18018
overseas, Air Force pamphlet—	5867
personnel in State and Federal in-	
stitutions, National prisoner	
statistics, 1961—	9328
program for changing times	
(speech)—	13875

Employment—Continued	Entry
public, State distribution, 1962—	9728
railroad industry (address)—	1184
range managers, outlook—	20934
recreation specialists with Air	
Force—	16777
retired naval personnel, reference	
guide—	12771
rural youth, perspectives (address)—	18019
sand and gravel industry, data,	
1960—	9115
security research exchange—	395
self-employed—	
nonagricultural, etc., area, esti-	
mating, handbook—	19126
social security information—	7374
tax retirement act of 1962, pro-	
visions—	1497
service advisors, examination an-	
nouncement—	6027,
service occupations employ more	
than 8 million workers, chart—	1188
services development program for	
smaller communities—	17407
services for special worker groups,	
supplement—	4833
skilled workers, outlook—	5459
smaller communities program in	
Fulton County, Ark—	2175
State and local government employ-	
ment and payrolls—	4205
statistics, BLS seasonal factor	
method—	12791
statistics, States and area 1939-62—	14476
statistics, U.S., 1909-62—	19792
status and work experience, census	
of population, 1960—	18705
status, weeks worked, year last	
worked, population of U.S.,	
census 1960—	1883
student-learners, code of Federal	
regulations—	14771
students, student workers under	
fair labor standards act—	16654
trends and manpower requirements	
in Government—	14438
veterans, services through State-	
Federal affiliated agencies, re-	
port, July 1962-June 1963—	17404
women workers in U.S., background	
facts—	1595
workers covered by State unemploy-	
ment insurance laws—	3615
youth—	
challenge of jobless—	9327
design for community action—	3017
employment act of 1963—	
hearings—	8128,
reports—	7960,
job guide for young workers—	4835
list of publications—	5434
President's Committee on Youth	
Employment, reports of sub-	
committees—	18274
programs, message from the	
President—	4728
service for youth—	4833
special training needs—	10885
see also Discrimination in employ-	
ment—Farm labor—Govern-	
ment officials and employees—	
Handicapped—Labor—Man-	
power—Occupations—Veter-	
ans—Women—	
Employment agencies, see Employ-	
ment offices.	
Employment certificates, where to ob-	
tain, requirements, etc—	10784
Employment management:	
Federal Government, manpower	
utilization, hearings—	13665,
hearings, employee relations, how	
to conduct—	6574

# INDEX 1963

Entry	Entry
Employment offices:	Enemy property:
Employment Service local offices—	administration of trading with the
directory ..... 19127	enemy act, report ..... 8075
organization handbook ..... 19128	return of Austrian property, rights,
private, State laws regulating, map	and interests, agreement ..... 20515
series ..... 9037	Energy, <i>see</i> Atomic energy—Force
Employment security activities, <i>see</i>	and energy—Radiant energy.
Unemployment insurance.	Energy balance and water use ..... 7548
Employment Security Bureau:	Energy conversion:
accomplishments and services to	literature search ..... 7708
workers and employers (ad-	magnetogas dynamic, effects at
dress) ..... 19122	cathode of plasma diode, USSR
BES series ..... 4832,	study ..... 12498
6353-54, 12084, 13873, 19124-126	Energy dissipation, stilling well de-
budget, amendment ..... 11922	sign dissipator for storm-drain-
handbook series ..... 19128	age outfalls, hydraulic model
practice of concurrent payments	investigation ..... 10091
and unemployment benefits to	Energy metabolism, <i>see</i> Metabolism.
retired members of Armed	Energy resources, <i>see</i> Power re-
Forces, GAO report ..... 15591	sources.
publications, list ..... 19125	Energy spectrum, <i>see</i> Spectra.
smaller communities program in	Enforcement of law, <i>see</i> Law enforce-
Fulton County, Ark. .... 2175	ment.
uneconomical practices in admin-	Engel, Olive G., collisions of liquid
istration of Employment Ser-	drops with liquids, crater depth
vice and unemployment compen-	in fluid impacts ..... 11516
sation programs ..... 10271	Engelmann spruce, <i>see</i> Spruce.
Employment security offices, <i>see</i> Un-	Engineered performance standards:
employment insurance.	bibliography ..... 15030
Employment Service:	general formulas, all crafts ..... 1607
administration, uneconomical prac-	masonry, formulas ..... 9519
tices, GAO report ..... 10271	masonry handbook ..... 11420
local offices—	moving rigging handbook ..... 1609
directory ..... 19127	pipefitting plumbing handbook ..... 1610
organization handbook ..... 19128	roads, grounds, pest control—
meeting training needs of hard-core	formulas ..... 11421
unemployed (address) ..... 19122	handbook ..... 11422
participation in labor market ..... 4834	Engineering:
veterans, Federal-State cooperative	air pollution control, status of engi-
program, report, July 1962-	neering knowledge as factor ..... 1423
June 1963 ..... 17404	atomic, of Hungary ..... 798
Employment taxes:	career opportunities, TVA ..... 7475-76
IRS looseleaf regulations system ..... 12250,	computer engineering problems,
15641	USSR studies ..... 1016
net receipts under Federal unem-	cost targets, regulation ..... 17411
ployment tax act, 1964, esti-	cybernetics, USSR study ..... 2894
mates ..... 13464	defense communications system in-
reduction of temporary additional	stallation standards manual ..... 17340-
unemployment tax—	341
law ..... 11723	degrees earned, 1949-60 ..... 17365
reports ..... 7971, 9869, 9989	East European journals, abstracts ..... 734,
temporary unemployment compen-	922, 1069, 2646, 2728, 2876, 2928,
sation act amounts, restora-	5384, 5420, 6680, 6714, 8523,
tion, revise law, report ..... 20470	8586, 8688, 8779, 8884, 10429,
Emaweller, S. L., roses for the home ..... 16738	10534, 10606, 10713, 10793,
Enargite, compounds, thermoelectric	12305, 12669, 12687, 14110,
properties ..... 9129	14412, 14326, 15745, 15884,
Encephalitis, diphtheritis, in rate,	16139, 16204, 16220, 17780,
cytochemical study of neuronal	17857, 17914, 17990, 19613,
Golgi apparatus ..... 7193	19048, 19706, 19760, 20874,
Encephalography, <i>see</i> Electroenceph-	20888.
alography.	engineering and equipment, Soviet
Encephalopathy, anoxic and anoxic-	and Chinese articles, English
ischemic, in rats, cytochemis-	abstracts ..... 3624
try ..... 7195	engineering circulars ..... 3236, 9276
Encyclopedias:	engineering design handbook
insect anatomy, contribution ..... 16561	series ..... 20322-324
USSR, biographic information from	engineering journal (USSR period-
Bol'shaya Sovetskaya entsik-	ical), translations ..... 14214
lopediya ..... 6744	engineering monograph ..... 5706
USSR, great medical, translations ..... 5168,	enrollments and degrees, 1961 ..... 6333
5371	enrollments and degrees 1961-62,
Endocarditis, <i>see</i> Heart diseases.	advance report ..... 6320
Endocrinology, breast, occurrence of	financial aid for students, listing ..... 18284
pathological processes, effect of	graduate training grants ..... 3260
endocrine preparations, USSR	honors and award practices of Fed-
study ..... 17985	eral Government ..... 26380
Endotoxins, potentiation in mice by	Hungary, recent statutes ..... 6702
exposure to cold ..... 18477	information systems, design, man-
Endrin, tests of arasan 75-endrin 50W	agement and use, Federal plans
rodent repellent on acorns ..... 12184	for improvement, hearings ..... 12017
	journal of engineering physics
	(USSR periodical) ..... 19594



# JANUARY-DECEMBER

	Entry
<b>Engineering—Continued</b>	
Journal of research, National Bureau of Standards, 3817, 9205, mine-systems analysis, design and applications of some mathematical models-----	12895
Novosibirsk Institute, 30th anniversary, USSR study-----	5485
ordnance design handbook, experimental statistics-----	19420
planning and analysis of comparative experiments-----	7379
special topics-----	9315
standard techniques for analysis of enumerative and classificatory data-----	5664
personnel, role in raising labor productivity, USSR study-----	19503
physics, journal, translations, USSR-----	14103
power, abstracts pertaining to Communist China in Soviet journals-----	1032
psychology, central problems, USSR study-----	12546
public health engineering abstracts-----	5408
publications, price list-----	4114
reliability, Naval Weapons Bureau data-----	3265
research proposals submitted to sponsors by New York University, etc., case study of support-----	9280
Rumania, recent statutes-----	19984
standard instructions for Army facilities-----	7127
students, C&GS training program in photogrammetry-----	4839
teachers, summer institutes and conferences-----	1952
technology, 2-yr. college programs, ECPD accredited, 1962-----	1363
USSR, Lenin prizes, 1963-----	13876
USSR scientific abstracts-----	12446
15949, 17809, 19682-----	14106
value engineering concepts and techniques, handbook-----	10039
see also Agricultural engineering-----	
Chemical engineering—Civil engineering—Electric engineering—Human engineering—Marine engineering—Mineral engineering—Petroleum engineering—Radio engineering—Telephone engineering-----	
Engineering aids, 3 & 2, Navy training course-----	14628
Engineering and design, regulations-----	6376
<b>Engineers:</b>	
architect-engineer contracts, how to obtain consideration with Defense Dept.-----	6313
architect engineers on AEC projects, list-----	13252
Army, contract instructions-----	2217
career opportunities-----	
civilian, Air Force Dept.-----	1748
Federal Government-----	1944-45
Public Health Service-----	16495
Public Roads Bureau-----	3302
TVA-----	7475-76
conducting research and development in colleges and universities, 1958-----	9251
Conference on Scientific Manpower, papers-----	16447
employment in industrial research, etc.—	
1960, final report-----	12934
1962, preliminary report-----	18212
fallout shelter analysis, directory-----	7777
hospital, in construction sequence-----	18713
7404-----	

	Entry
<b>Engineers—Continued</b>	
in engineering schools, 1961-----	21044
Indian health program-----	11232
manpower resources in colleges and universities, 1961-----	3194
Marine Corps, operations, Fleet Marine Force manual-----	20940
mobilizing skills for civil defense (address)-----	6019
overseas, Air Force pamphlet-----	5868
research and development, 1956-61-----	11132
19986-----	
scientific manpower from abroad, errata-----	1360
Soviet, awards-----	15740
Yugoslav association, honorary, etc., members-----	944
see also Civil engineers—Engineering aids—Marine engineers—Radio engineers—Sanitary engineers-----	
<b>Engineers Corps, Army:</b>	
circular EC series-----	4839
civil functions, budget, 1964, amendment-----	13462
finance and fiscal accounting and reporting, civil works activities, manual, change-----	2209
investigations and studies, engineering and design regulation-----	17412
manuals-----	724-734
2209-11, 4859-65, 6369-74, 8196, 10085-88, 12088-91, 13878-879, 17408-410, 19142-144-----	
military science, basic construction principles-----	5919
regulations, ER series-----	2217
6376, 13881, 17411-412-----	
report 1962, civil works activities—departmental edition-----	8192
document edition-----	7846
Southwestern Power System activities, GAO audit, report-----	13454
specifications, military construction, manual change-----	12197
staff tables of functional components system, technical manual-----	17410
13241-----	
<b>Engineers Corps Board of Contract Appeals, digest of decisions-----</b>	4853
<b>Engineers Council for Professional Development, accredited programs, 1962, engineering technology-----</b>	13870
<b>Engineer's digest (periodical)-----</b>	3620
<b>Engines:</b>	
accessories, Federal Item Identification guides for supply cataloging, supplements-----	3652
defective rocker arm assemblies for combat vehicle engines, procurement from Hawk Tool and Engineering Co., Clarkston, Mich., by Army Dept., GAO review-----	19285
Federal Item Identification guides for supply cataloging, supplements-----	3652
internal combustion-----	
current industrial reports, 1962-----	20354
radio interference shielding-----	
catalog-----	9521
installation, etc., handbook-----	9520
<b>Engines (aircraft):</b>	
airworthiness-----	
civil aeronautics manual-----	8213
civil air regulations amendment-----	4879
bearings, uneconomical procurement by Navy Department, GAO review-----	5009
current industrial reports-----	3574, 7752
electrothermal, effects of nonuniform flows on performance-----	12866

# INDEX 1963

Entry	Entry
Engines (aircraft)—Continued	
industry, aircraft engines and engine parts, outlook for 1963 and review of 1962-----	5971
inlets designed for inlet-engine matching up to Mach 3, performance at Mach nos. 3.07, 1.89 and 0-----	16355
jet, management by Air Training Command in ground training programs for Air Force Dept., GAO review-----	592
ramjet-----	
afterburner using gaseous hydrogen as fuel-----	3106
combustor, can-type flame holder, altitude investigation-----	5512
nuclear ramjet test reactor, Tory II-A-----	4495
pentaborane fuel investigation-----	5518
pressures and fuel flow, simplified theory for dynamic relation-----	7231
simulation methods for operational flight trainers-- 18227, 19998-----	20000
specifications-----	3619
specifications and type certificate data sheets-----	17417
supersonic turbofan, investigation of rotating-stall limits-----	5525
T-37/J-69, vibration tests-----	9607
turbojet-----	
combustion performance of annular combustors-----	14530
combustors, effect of fuel injectors and liner design on performance-----	14529
hydrogen as fuel, effect of combustion gas properties on performance-----	1259
performance and operation at high altitudes with hydrogen and Jp-4 fuels-----	1260
performance in combination with external-internal-compression inlet-----	5562
short combustor, performance with hydrogen fuel in quarter-annulus duct, etc-----	10976
thrust augmentation by combined compressor coolant injection and afterburning-----	5513
turboprop, cooling characteristics of corrugated-insert air-cooled turbine blade, cascade investigation-----	1268
see also Rockets—Turbines.	
England, see Great Britain.	
Engle, Glen B., high-energy neutron-induced changes in carbon and graphite-----	4477
Engleman, Elvis E., adult education, dimensions and necessities-----	20629
English, Robert E., effect of combustion gas properties on turbojet-engine performance with hydrogen as fuel-----	1259
English Channel, lights and fog signals, list-----	3209, 21052
English language:	
dictionary, Chinese-English, modern Communist China usage-----	17846
naturalization candidates, home study course-----	14043-45, 15628, 17542, 19343
needed research in teaching, proceedings of Project English Conference-----	10076
Project English newsletter-----	381, 12072, 20640
resources of teaching (series)-----	364
teaching forum, facts and ideas for teachers of English as a foreign language-----	14762
Englund, Eric, summary and evaluation of United Kingdom, projected level of demand, etc., of farm products in 1965 and 1975-----	17356
Englund, K. J., geology of Ewing quadrangle, Ky.-Va-----	6551
Eniwetok Atoll, subsurface geology-----	19308
Enlisted personnel, see Armed Forces.	
Enlistment, see Recruiting and enlistment.	
Enochian, Robert V., present and potential use of egg products in food manufacturing industry-----	13175
Enrollment, see Colleges and universities—High schools—Schools.	
Easminger, M. E., light horses-----	24
Entente States, import tariff system-----	2393
Enterovirus:	
Arctic ground squirrels, effect of hibernation on retention-----	18476
human, susceptibility of baboon kidney cells-----	1775
isolation from baboon-----	5892
Enterprise (U.S.S.):	
propulsion machinery, overcharges by Westinghouse Electric Corporation, GAO report-----	19283
tour hearing-----	208
Enterprise statistics, 1958-----	9727
Entertainment, see Amusements.	
Entomologists, medical, examination announcement, discontinuance notice-----	15104
Entomology, Mongolian Peoples Republic, research-----	17630
Entries of land, see Homesteads.	
Entropy:	
calculating of output processes of automatic control systems with use of logarithmic amplitude characteristics, USSR study-----	12332
magnesium metavanadate and magnesium pyrovanadate-----	3088
monomolybdates of sodium, magnesium, and calcium-----	3101
moscovite-----	16347
sesquioxides of—	
erbium, holmium, thulium, and ytterbium-----	5501
lutetium, dysprosium, and cerium-----	14513
scandium and cerium-----	14511
sodium dimolybdate and sodium ditungstate-----	9122
vanadium silicide-----	12837
Entry into atmosphere, see Atmospheric entry.	
Environment:	
analysis, Pennsylvanian limestones from central Texas-----	19309
carbon monoxide, light-induced in closed systems of space vehicles-----	18506
conditions affecting military logistics in Thailand-----	1434
conditions, effect on heritability of characteristics, USSR study-----	12331
contamination, off-site, from nuclear explosives, Nevada Test Site, Sept. 15, 1961–Sept. 15, 1962-----	18599
controlled facilities, survey-----	16526
earth's atmosphere as part of space field-----	3125
environmental temperature and energy expenditures, report-----	116
factors affecting ground mobility in Thailand-----	13888
frictionless, simulating with use of various types of air bearings, design-----	7243

# JANUARY-DECEMBER

Entry	Entry
Environment—Continued	Epstein, Leo F.:
health activities, public Health Service..... 12989	deposition of matter from flowing stream, etc..... 18568
health factors, nursing homes..... 12999-13019	liquid metal studies in France and Great Britain..... 12846
health series, radiological health..... 3279, 9338, 12990, 20093	Equal Employment Opportunity Administration, establish in Labor Dept., hearings..... 17323
interplanetary lunar and near planet..... 4392	Equal Employment Opportunity Board, establish, hearings..... 17323
pathogenic microbes, survival and detection, USSR study..... 19548	Equal Employment Opportunity Commission, establish, hearings..... 17323, 18931
radioactive contamination, USSR study..... 12497	Equal rights, <i>see</i> Women.
simulated Martian, bacterial synergism studies..... 7638	Equality of Opportunity in Employment Commission, create, hearings..... 17323
simulated space, human reactions, USSR study..... 14355	Equalization teaching machine..... 11183
space, effects on plastics, summary with bibliography..... 348	Equations:
space research, laboratory techniques..... 5552	battery discharge, primary and secondary cells, theoretical design..... 18244
temperature alterations, effect on absorption of calcium, iron and vitamin B <sub>12</sub> ..... 18484	board-foot and cubic-foot volume computing equations for southeastern tree species..... 10243
tests, satellite reliability..... 16388	differential, computer technique for solving reaction rate in E ionospheric region..... 1737
Environmental hygiene, <i>see</i> Hygiene.	differential, 2d-order, error propagation of interpolation formulas..... 14568
Environmental problems of space flight structures..... 3137	Integral, relating general time-dependent lift and downwash distributions on finite wings in subsonic flow..... 3141
Enz, Richard W., water supply outlook and snow surveys for Arizona..... 4284	linear, wind-tunnel jet-boundary corrections and ground effect of VTOL-STOL aircraft..... 1322
Enzymes, liver, associated with amino acid metabolism, effect of protein intake and cold exposure, <i>see also</i> Proteinases.	nonlinear attitude control systems for space vehicles, techniques for analysis..... 47
Ephemeres:	nonlinear differential, approximate solution of 3d order with N. N. Bogolyubov asymptotic method..... 3168
American ephemeris and nautical almanac, 1965..... 18213	nonlinear functions, simple methods of estimating with emphasis on agricultural data..... 18417
calculation from initial values..... 1277	normal, algorithm for solving large systems by means of multi-group method on electronic computer, USSR study..... 1085
ephemeris of sun, Polaris, etc., 1964..... 14486	power series solutions of 1-dimensional flow equation for exponential and linear diffusivity functions..... 1629
Epidemiology:	pulse-radar range calculation..... 12957, 18232
animal parasites, Rumanian study, focus of infection, investigation, USSR study..... 16010	simultaneous onboard optical measurements for lunar vehicle position in earth-moon space..... 5596
journal of microbiology, epidemiology, and immunobiology (USSR periodical), translations..... 15933	solutions, 3-dimensional equation of radiative transport..... 11176
view of chronic pulmonary insufficiency in U.S..... 3280	tables of eigenvalues and eigenvectors of Hamiltonian describing combined static magnetic dipole and electric quadrupole interaction of nuclear level..... 138
Epilepsy, hope through research..... 1406	tables of Gauss' hypergeometric function ${}_2F_1(a, b, c; z)$ , etc., with comments on closed forms of ${}_2F_1(a, b; c; z)$ ..... 18139
Epinephrine: effects on EEG activation response..... 5886	tables relating to radial Mathieu functions..... 84, 4397
output, effect of cold and smoking..... 16804	Equations of motion:
Epithelial cells, cornea, study of mitotic cycle by means of tritium-tagged thymidine, USSR..... 16153	close earth satellites, critical inclination theory..... 19914
Epizootiology, practical exercises, USSR textbook..... 10816	dislocation, USSR study..... 5351
Epoxy resins, <i>see</i> Resins.	generalized problem of 2 fixed centers and its application for artificial earth satellites, USSR study..... 12315
Eppley, Charles V.:	
history of USAF Experimental Flight Test Pilot School..... 7610	
rocket research aircraft program, 1946-62..... 5862	
Epstein, Edmund N., adjustment to submergence aboard submarine..... 7198	
Epstein, Lenore A.:	
money income of the aged..... 14699	
State variations in income of the aged..... 1500	
Epstein, Leo:	
occupational wage survey—	
Boston, Mass..... 5442	
Burlington, Vt..... 12797	
Lawrence-Haverhill, Mass.-N.H..... 16288	
Manchester, N.H..... 1172	
New Haven, Conn., Jan. 1963..... 9059	
Portland, Maine..... 9034	
Providence-Pawtucket, R.I.-Mass..... 16281	
Waterbury, Conn..... 12796	
Worcester, Mass., June 1963..... 18035	

# INDEX 1963

Entry	Entry
Equations of motion—Continued	Erosion:
in-plane vibrations of flat spinning disk, corrected copy.....	flow testing of defected stainless steel clad compacted UO <sub>2</sub> powder fuel.....
long-period motion of the Trojans as restricted three-body problem, Thuering's theory.....	resistance of nozzle materials in solid-propellant rocket engine.....
meteorology, transformation into arbitrary orthogonal coordinates.....	see also Soil erosion.
nonlinear systems, graphical-numerical method for transient response.....	Erosion control, see Soil erosion.
restricted three body problem representing Keplerian elliptic motions.....	Errors:
three-dimensional optimal ascent from lunar surface.....	analysis of humidity-temperature measuring set, AN-TMQ-11.....
transform to standard form, etc.....	propagation, interpolation formulas for 2d-order differential equations.....
Z-function solutions for motion, etc., during atmosphere entry from equatorial orbits of rotating planet.....	rates in multiple FSK systems and signal-to-noise characteristics of FM and PCM-FS systems.....
Equatorial balloon flights, agreement with India.....	ERS, see Economic Research Service.
Equilibrium:	ERS-foreign series.....
chemical, IBM 704 or 7090 computer program for computation.....	ERS series.....
P-T univariant pressure curves for reaction forsterite + calcite-monticellite + periclase + CO <sub>2</sub> , experimental studies on Bowen's decarbonation series, II.....	Erston, Walter F., rolling liquid transporter trailer kit.....
Equipment characteristics and their relation to system performance for tropospheric communication circuits.....	Erythrocytes, see Blood.
Equipment specialists, examination announcement.....	Escalator clause, see Wages.
Equipments, see Dental Instruments and apparatus—Handling equipment—Hospital apparatus and supplies—Inspection equipments—Military supplies—Production equipment—Veterinary instruments and apparatus.	Escalona, Sibylle K., children's responses to nuclear war threat.....
Equity, small manufacturing firms, sources.....	Escanaba, Mich., port, harbor conditions, etc.....
Equity Cooperative Livestock Sales Association, Wisconsin, activities.....	Escapees, see Refugees.
ER series.....	Escapeways and other emergency measures in coal mines.....
1850-62, 4514-51, 5963-82, 7732-33.	Esch, Harriette H., Federal Trade Commission decisions, findings, etc.....
Erbium oxide, high temperature spectral emissivity.....	Escobar, Denise J. (nee Arnoux): relief.....
Erbium sesquioxide, high-temperature heat content and entropy.....	ESD, see Earth Sciences Division—Electronic Systems Division.
Ergin, E. I., techniques for analysis of nonlinear attitude control systems for space vehicles.....	La Esfera (periodical):
Erickson, Ralph L., geochemistry, etc., of Magnet Cove alkalic igneous complex.....	exposes Venezuelan University's School of Journalism as Marxist Indoctrination Center.....
Erickson, Wayne D.: extension of estimated hypersonic flow parameters for helium as real gas.....	Esgar, Jack B., materials-research areas of importance to missile and space vehicle structures.....
vibrational-nonequilibrium flow of nitrogen in hypersonic nozzles.....	Eskildsen, C. R., address, May 24, 1963.....
Ericson, Anna-Stina, labor law and practice in Bolivia.....	Eskimos, Anchorage area, Alaska, information digest.....
Erie-Lackawanna RR., accidents.....	Esophageal cooling as technic of selective brain hypothermia.....
Erie, Lake, small craft, gale and whole gale warning facilities chart, 1963.....	Espenshade, Gilbert H., geology of phosphate deposits of northern peninsular Florida.....
Erie National Wildlife Refuge, general information.....	Espionage:
	Communist patterns, report, additional copies, report.....
	reflections concerning Lithuanian bourgeoisie, USSR study.....
	Essential United States trade routes.....
	Estate tax, see Inheritance and transfer tax.
	Estep, Raymond, aerospace bibliography.....
	Esters, polymerization and copolymerization of unsaturated fatty acids and their esters.....
	Estes, Billie S., pooled cotton allotments, Agriculture Dept. handling, hearings.....
	Estimado amigo, informacion sobre sanidad para los viajeros que visiten los Estados Unidos.....
	Estimating occupational disease hazards through medical care plans.....

	Entry
Estonia Soviet Socialist Republics:	
Academy of Sciences, scientists in ideology general meeting.....	19692
Industry in Estonian SSR and its key cities.....	5332
Estuaries:	
radionuclide studies, symposium.....	12990
tidal, hydraulic geometry.....	15612
Eternal outsider.....	17782
Ethanol, extractive of tobacco, total.....	1639
Ethers:	
infrared spectra between 15 and 35 microns.....	11474
trimethylsilyl, use in determining phenols in coal tar oils and hydroxyl content in coal.....	9110
see also names of ethers.	
Ethics:	
application in business world (address).....	1958
business challenge (address).....	20391
duty, honor, country, character guidance discussion.....	102
moral strength in business (address).....	6049
soldiers' honor, Army pamphlet.....	11540
Ethiopia:	
agricultural commodities, agreement.....	16585
economy, basic data.....	17560
establishing business.....	5081
exports and imports, licensing and exchange controls.....	2431
mapping, cooperative program, agreement.....	9437
Ethnology:	
Communist China, ethnography and national minorities.....	960
publications, price list.....	18279
South China ethnological information.....	664
Soviet ethnography, recent articles.....	12271
Ethylene dibromide, use for fumigation of Mexican fruits, manual.....	20207
Ethylenediaminetetraacetic acid, see Acetic acid.	
Etiology:	
animal parasites, Rumanian study.....	19436
USSR book, critical review.....	17966
Eugene, Oreg., electric facilities of area, map.....	519
Euratom, see European Atomic Energy Community.	
Eureka County, Nev., Paleozoic rocks of area.....	10291
Eureka to Point Conception, Calif., coastal warning facilities chart, 1963.....	11383
Europe:	
Berlin situation, U.S. policies, report.....	4774
Communist China's propaganda activities.....	17868
Eastern—	
agricultural situation, 1963.....	12047
agriculture, forestry, and food industries, translations.....	688,
770, 818, 884, 942, 994, 1050,	
1071, 2498, 2512, 2563, 2671,	
2715, 2765, 2849, 2871, 2927,	
2951, 3000, 5117-18, 5228, 5303,	
5394, 6660, 6727, 6776, 6831,	
6847, 6907, 6926, 6977, 7009,	
7059, 7093, 7111, 8581, 8607,	
8628, 8680, 8725-26, 8780, 8796,	
8818, 8830, 8933, 8961, 10362,	
10421, 10510, 10530, 10543,	
10565, 10577, 10588, 10594,	
10631, 10650, 10740, 10743,	
10781, 10790, 10829, 10833,	
10874, 12394, 12403, 12434,	
12450, 12473, 12541, 12563,	
12647, 12692, 12718, 12729,	
12739, 14091, 14119, 14156,	

	Entry
Europe—Continued	
Eastern—Continued	
agriculture—Continued	
14169, 14275, 14316, 14416,	
15686, 15747, 15818, 15876,	
15921, 15958, 15975, 16011,	
16040, 16227, 17653, 17727,	
17759, 17788, 17832, 17870,	
17941, 17978, 19405, 19460,	
19481, 19510, 19542, 19609,	
20783, 20908.	
American surplus wheat sales.....	18812
captive nations, trends and current conditions, report on hearings.....	9880, 18940
development of Socialist Slovakia (speech).....	2536
economic organization and management.....	674,
677, 768, 800, 890, 904, 923, 955,	
1022, 1028, 1119, 1139, 1149,	
2456, 2548, 2623, 2631, 2641,	
2656, 2682, 2692, 2749, 2902,	
2922, 5113, 5126, 5132, 5226,	
5233, 5264, 5270, 5340, 5362,	
5406, 5417, 6735, 6780, 6826,	
6846, 6863, 6874, 6928, 6957,	
6992, 7005, 7021, 7050, 7121,	
8469, 8481, 8493, 8558, 8593,	
8631, 8638, 8671, 8706, 8728,	
8753, 8757, 8764, 8781, 8789,	
8802, 8875, 8888, 8900, 8913,	
10382, 10407, 10435, 10449,	
10474, 10508, 10557, 10559,	
10580, 10586, 10593, 10628,	
10662, 10670, 10681, 10735,	
10841, 12280, 12327, 12329-330,	
12393, 12470, 12472, 12480,	
12485, 12542, 12565, 12583,	
12601, 12603, 12625, 12643,	
12676, 12707, 12763, 14131,	
14176, 14228, 14248, 14260,	
14288, 14305, 14315, 14318,	
14420, 14425, 15730, 15750,	
15758, 15773, 15809, 15830,	
15888, 15899, 15942, 15965,	
16042, 16077, 16110, 16148,	
16163, 16188, 16211, 16241,	
17613, 17725, 17744, 17823,	
17850, 18005, 19380, 19418,	
19430, 19550, 19591, 19652,	
19687, 19701, 19716, 19756,	
20797, 20820, 20856.	
Educational Materials Laboratory report.....	15429
foreign trade, translations.....	692,
889, 1019, 1026, 2630, 2653, 2784,	
2809, 2914, 5131, 5133, 5229,	
5293, 5330, 5337, 5410, 6733,	
6786, 6818, 6875, 6964, 7018,	
7124, 8467, 8568, 8592, 8619,	
8724, 8756, 8790, 8820, 8912,	
8998, 10475, 10558, 10581, 10601,	
10666, 10827, 12279, 12346,	
12469, 12477, 12543, 12602,	
12639, 12660, 12753, 14229,	
14312, 14361, 14390, 15717,	
15907, 16030, 16147, 16199,	
17708, 17848, 19431, 19495,	
19577, 19636, 19644, 19679,	
19764, 20852.	
heavy industry, translations.....	723,
741, 786, 797, 894, 950, 974, 1014,	
1039, 1064, 1127, 1146, 2507,	
2684, 2702, 2796, 2855, 2966,	
5163, 5255, 5364, 6657, 6836,	
6918, 6960, 6986, 7043, 7102,	
8496, 8501, 8548, 8623, 8746,	
8793, 8872, 8994, 10370, 10438,	
10492, 10582, 10647, 10691,	
10748, 10755, 10850, 12351,	
12455, 12500, 12571, 12618,	
14191, 14317, 14421, 15712,	
15869, 15997, 16047, 17585,	
17879, 17962, 19381, 19671	



# INDEX 1963

	Entry
Europe—Continued	
Eastern—Continued	
legal journals, abstracts	696,
756, 857, 941, 959, 980,	1103,
1121, 2474, 2554, 2575,	2660,
2789, 5138, 5246, 5342,	6648,
6730, 6897, 7076, 7128,	8528,
8575, 8672, 8736, 8812,	8819,
8854, 8891, 10379, 10477,	10694,
10702, 10808, 10856,	12345,
12389, 12556, 12592,	12768,
14194, 14337, 14381,	15732,
16045, 16075, 16088,	17597,
17847, 17867, 17971,	19373,
19425, 19466, 19635,	20867,
20904,	
materials industries, transla-	
tions	659,
719, 735, 822, 973, 1065,	1131,
2505, 2573, 2603, 2774,	2964,
2994, 5300-1, 5380, 6734,	6854,
6934, 6987, 7042, 8471,	8531,
8622, 8745, 8794, 8950,	10371,
10442, 10493, 10525,	10659,
10734, 10818, 12281,	12356,
12501, 12533, 12598,	12619,
14200, 14308, 15705,	15718,
15863, 15901, 15980,	17578,
17881, 17945, 18001,	19559,
19664, 19733, 20894,	
military information, transla-	
tions	810,
870, 990, 2642, 2842, 2925,	6751,
7061, 7122, 8453, 8559,	8695,
8755, 8809, 8895, 10376,	10463,
10667, 10688, 12349,	12385,
12422, 12481, 12511,	12568,
12644, 14089, 14387,	15706,
15810, 17593, 17783,	19498,
19515, 20860,	
political translations	718,
784, 809, 824, 972, 981,	1036,
1126, 2576, 2619, 2697,	2717,
2773, 2854, 2863, 2940,	2990,
5108, 5128, 5256, 5290,	5379,
5411, 6837, 6917, 6985,	7090,
8472, 8547, 8621, 8676,	8795,
8904, 8927, 10372, 10444,	10497,
10585, 10660, 10690,	10704,
10732, 10805, 10873,	12277,
12350, 12456, 12540,	12725,
12762, 14197, 14380,	14391,
15769, 15902, 15952,	16008,
16086, 17688, 17833,	17851,
19416, 19556, 19672,	19695,
20806,	
scientific and technical journals,	
abstracts	734,
778, 858, 901, 922, 940, 964,	1027,
1048, 1069-70, 1092, 1111,	2494,
95, 2542-43, 2597-98,	2613,
2645-47, 2675, 2726-30,	2755,
2757, 2777, 2812-13,	2874-78,
2928-29, 2947-50, 5121,	5173-75,
5206-8, 5243, 5275-78,	5308-10,
5350, 5381-84, 5420-21,	6637B,
6639, 6672, 6674, 6699,	6710-11,
6714-15, 6717, 6796-98,	6820,
6849, 6879-81, 6911-12,	6949,
6981, 7014, 7087-89,	8475-77,
8479, 8522-24, 8586,	8608-9,
8615, 8685-88, 8774-79,	8846,
8882-86, 8962, 8976,	10394,
10396, 10419, 10428-30,	10453,
55, 10466-67, 10534-37,	10546,
47, 10606-10, 10673,	10677,
10712-15, 10720, 19722,	10764,
10793-99, 10866-68,	12298,
12300-305, 12418-419,	12438,
439, 12448, 12525-528,	12555,
12558-560, 12579, 12664-67,	
12684-687, 12732, 12740,	12742-
744, 12746-747, 14086,	14094,

	Entry
Europe—Continued	
Eastern—Continued	
scientific and technical journals,	
abstracts—Continued	
14108-110, 14225-227,	14258,
14290-291, 14325-329,	14333-
334, 14370-371, 14375,	14412,
14417-418, 15696-698,	15714-
715, 15744-745, 15874,	15877-
878, 15884, 15893,	15923-924,
15983, 15994, 16007,	16014,
16138-142, 16162, 16166,	16201,
16204-205, 16207, 16218-220,	
17590, 17598, 17617-618,	17621,
17639, 17692, 17716-718,	17780,
17791-792, 17824-825,	17837,
17855-857, 17876, 17897,	17914-
915, 17942, 17954, 17986,	17988-
990, 19394-395, 19428-429,	
19483, 19501, 19513, 19521-522,	
19527, 19340-541, 19585,	19604,
19612-613, 19623, 19646-648,	
19704-706, 19722-723,	19725,
19747, 19760, 19771,	20763,
20794, 20837, 20839-841,	20873,
20886-889,	
scientific and technical literature,	
guide	5646
scientific personalities, informa-	
tion	8679
service industries, translations	743,
769, 855, 911, 918, 943,	1046,
1080, 2497, 2564, 2612,	2767,
2798, 2895, 2910, 2938,	2961,
5136, 5180, 5196, 5201,	5224,
5328, 5412, 6709, 6720,	6830,
6844, 6862, 6980, 7015,	7038,
7086, 8466, 8480, 8506,	8553,
8605, 8689, 8733, 8768,	8877,
8901, 8926, 8972, 9001,	10363,
10393, 10456, 10484,	10649,
10672, 10700, 10710,	10878,
12278, 12294-296, 12512,	12518,
12523, 12531, 12630,	12719,
12731, 14114, 14180,	14220,
14237, 14352, 14406,	15729,
15772, 15851, 15922,	15934,
15974, 15990, 16053,	16092,
16116, 16164, 16258,	17573,
17610, 17637, 17759,	17822,
17871, 17895, 17913,	19432,
19512, 19589, 19630,	19642,
19668, 19755, 20766,	20862,
sociological translations	693,
811, 862, 903, 1023, 989,	1108,
1141, 2632, 2655, 2783,	2838,
2888, 5114, 5230, 5265,	6693,
6781, 6887, 7006, 7026,	7125,
8554, 8589, 8637, 8749,	8788,
8810, 8874, 8890, 10414,	10624,
10728, 10789, 10822,	10851,
12293, 12358, 12420,	12471,
12483, 12569, 12632,	12754,
12759, 14172, 14175,	14259,
14307, 15716, 15760,	15774,
15875, 15940, 16000,	16041,
16046, 16122, 16194,	17648,
17849, 18003, 19486,	19685,
19703, 19766, 20778,	20798,
20850, 20903,	
economic policy evolution, effect on	
United States	9395, 9646
European and British Common-	
wealth series	9395, 13061
flight information publications—	
enroute high altitude	3690
enroute low altitude	3694
planning, air traffic control pro-	
cedures	3699
foreign operations appropriations,	
1964, hearings	18918
health information for travel	16499

# JANUARY-DECEMBER

	Entry		Entry
Europe—Continued		Europium oxide, thermal expansion—	7217
housing, intensity of development,		Evacanthidae, catalog—	1650
etc., of multi-family projects—	12911	Evacuation, coastal areas for Hurri-	
law of employed inventors, study—	6303	cane Carla, Sept. 3-14, 1961,	
tide tables—	11674	civil defense report—	180
United States relations, etc.—	13061	Evaluating ecological trends on camp-	
west coast, lights and fog signals,		grounds—	19262
list—	11140	Evaluation and testing in teaching	
Western—		modern foreign languages—	4815
agricultural situation, 1963—	10060	Evans, John S., investigation of effect	
automotive industry, USSR re-		of high temperature on Schu-	
port—	8535	mann-Runge ultraviolet absorp-	
conditions in selected countries,		tion continuum of oxygen—	1321
study mission report—	9866	Evans, R. L.:—	
Educational Materials Labora-		determining mass of liquid propel-	
tory report—	12061	lant within space vehicle tank	
military aid, subcommittee re-		subjected to zero gravity—	7259, 12850
port—	11900	launch deflector design criteria and	
Soviet economic offensive, special		application to Saturn C-1 de-	
study mission, report—	4749	flector—	9145
white collar unionism—	19802	Evans, T. F., deposition of matter	
European Atomic Energy Community,		from flowing stream, etc.—	18569
atomic energy, cooperation for		Evans, W. H., small office automation,	
civil uses, agreement, hearing—	1968	bibliography—	11277
European Common Market, see Euro-		Evanston, Ill., agricultural commodity	
pean Economic Community.		office, electronic data process-	
European corn borer, control—	1693	ing system, inadequacies,	
European Economic Community:		GAO review—	19281
and international economies, pro-		Evansville, Ind., Dress Memorial Air-	
blems, Soviet views—	2867	port, weather observations,	
and U.S. balance of payments (re-		hourly, decennial census—	21158
masks)—	7487	Evaporated milk, see Milk.	
antitrust developments, hearings—	13814, 17315	Evaporation:	
common external tariff, rates and		control, research, 1959-60—	6569
revisions resulting from 1960-		human waste, volatility at elevated	
61 tariff negotiations—	11294	temperatures—	18473
doing business with, selected read-		rhodium volatilization in molybde-	
ing list on European regional		nite concentrates, USSR study—	14331
economic organizations—	8379	Evaporators, maple sap, oil-fired, con-	
effect on U.S.—	13344	struction of arches and burners—	4341
effect on U.S. agriculture—	563	Evaporites, see Sedimentary rocks.	
effect on U.S. agriculture (ad-		Evapotranspiration, vegeta-tion,	
dress)—	9557	Blaney-Criddle method for esti-	
evolving agricultural policy and in-		imating, analysis and simplifi-	
ternational trade (address)—	1727	cation—	17488
France's key role in grain sector—	10206	Evenson, R. E., geology and ground	
general agreement of tariffs and		water of Point Arguello Naval	
trade, negotiation under trade		Missile Facility—	6565
expansion act of 1962, testi-		Everett, F. D.:—	
mony—	2066	mineral industry of Wyoming—	3071
grain production and trade statis-		mining practices at four uranium	
tics 1950-51 through 1961-		properties in Gas Hills, Wyo.—	9112
62—	6476	Everett, N. B., red cell formation rate	
grain regulations—	12149	in rats at 24° C and 5° C—	13203
market for U.S. agricultural prod-		Everglades National Park, general in-	
ucts, problems and benefits		formation—	19976
(address)—	9566	Evergreen Park, Ill., population,	
possible impact on U.S. economy		special census—	1899
(address)—	5814	Everhart, Philip E., flows past blunt	
potential demand as challenge to		bodies at transonic speeds—	5561
American advertisers (ad-		Evers, Arthur H., injuries and acci-	
dress)—	9771	dent causes in sawmills—	16275
problems and trends in Atlantic		EVESR (Esada Valleclitos experi-	
partnership, staff study—	11921	mental superheat reactor), see	
print as Senate document, report—	11989	Reactors (atomic).	
proposed patent convention, legal		Eviction, dependents of servicemen,	
questions, etc. (address)—	9322	protection, hearing—	8126
protocol to GATT, agreement—	18370	Evidence, material evidence, photo-	
today and tomorrow (address)—	10328	graphic and physical methods	
United States agricultural trade—	2142	for investigating, USSR study—	5164
United States fishing industry and		Evolution:	
European Common Market—	8273	algae, and nucleic acids, literature	
United States poultry exports, hear-		data—	18516
ings—	18915	processes of self-reproduction and	
USSR views—	695	evolution, attempt at modelling,	
wheat in Common Market, setting		USSR study—	5244
agricultural price (speech)—	1722	Evonuk, Eugene:	
European pine shoot moths:		cardiovascular effects of norepine-	
eradication with methyl bromide		phrine thermogenesis in warm-	
in commercial nurseries—	15582	and cold-acclimatized rats—	13206
fumigating on ornamental pines,		pulmonary effects of cold acclima-	
procedures and equipment—	6493	tization and norepinephrine	
		calorigenesis—	18474

# INDEX 1963

Entry	Entry
Evtushenko, Eugene, Fidel Castro interview-----	2791
Ewing, C. T., high temperature properties of sodium and potassium-----	3234, 16463
Ewing quadrangle, Ky.-Va., geology-----	6551
Examinations, see Civil service—also type or subject of examinations.	
Excavating machinery, equipment, Federal item identification guides for supply cataloging, supplements-----	3652
Excavation: Ogotoruk Creek area, Alaska, effects of nuclear detonations proposed-----	4494
operations, investigation of occupational hazards to young workers-----	18027
Exceptional children, see Children.	
Excess property, see Surplus property.	
Exchanges, see Foreign exchange.	
Exchanges (international), see International exchanges.	
Exelise taxes: Interest equalization tax on foreign securities— description and technical explanation-----	15336
hearings-----	18962
statement-----	21148
IRS looseleaf regulations system-----	629,
5055, 6582, 8372, 10325, 12251, 14064-66, 15642, 17551.	
rates, extension— hearing-----	13801
law-----	13426
reports-----	11831, 11840, 13718
Excitation of living cells as disturbance of steady state of open systems, USSR-----	19299
Excreta, see Feces.	
Excretion, ammonia excretion during hypothermia and urine titratable acidity-----	13215
Executive, see President of United States.	
Executive Branch of the Government, Commissions on Organization of, see Organization of Executive Branch of the Government Commissions.	
Executive departments, see Government reorganization plans—Government supplies.	
Executive Mansion, general information-----	7339
Executive Office of the President: appropriations, 1964— hearings-----	7985, 9997
law-----	13413
reports-----	7941, 9983, 11814
Executive orders, see President of United States—also subjects.	
Executive Papers, Joint Committee on Disposition of, reports-----	7920-22,
9881, 11793, 13591, 15251, 17102, 17140, 18845, 18884.	
Executives, Federal Government, introduction to personnel and pay systems-----	6030
Exercisability of tactile sensitivity, USSR-----	12342
Exercise: carbonic anhydrase inhibition, effect in exercising rats-----	14921
shape up program for Navy personnel-----	19996
Exercise therapists, examination announcements, discontinuance notice-----	187
Exhaust nozzles, see Nozzles.	
Exhibitions: Main Street U.S.A. opening ceremonies (remarks)-----	4653
Smithsonian Institution, traveling service, Daniels in India, catalog-----	3327
Exhibits: Agriculture Department, 50 years of marketing services-----	9528
displays and supplementary services incidental thereto, term contract-----	2283
Library of Congress-----	3631
technician and specialist, examination announcement-----	15101
Exits (aircraft): multiple jet, effect on base pressure of simple wing-body combination-----	5555
Exobiology, see Life on other planets.	
Exodontia: circular depth of 2d molar in impacted 3d molar surgery-----	82
stress patterns in dental patients adrenocortical responses in operative dentistry and impacted surgery-----	7639
surface contour changes after tooth extraction-----	7640
Expanded vinyl fabrics, see Textiles.	
Expansion (thermal): Magnesium oxide, interlaboratory study-----	3076
measurements to 2000°F with automatic recording dilatometer-----	20295
oxides of yttrium, cerium, samarium, europium, and dysprosium-----	7217
Expansion tubes, new device for producing high-enthalpy short-duration hypersonic gas flows-----	5614
Expenditures: consumer expenditures and income, 1960— Atlanta, Ga.-----	1166, 7151
Austin, Tex.-----	7156
Baltimore, Md.-----	7160, 12786
Boston, Mass.-----	1167, 7152
Buffalo, N.Y.-----	9050
Cedar Rapids, Iowa-----	10890, 14455
Champaign-Urbana, Ill.-----	12790, 14459
Chicago, Ill.-----	1165, 7150
Cincinnati, Ohio-----	18031-32
Cleveland, Ohio-----	12787-788
Dallas, Tex.-----	10892, 14457
Detroit, Mich.-----	7145-46
Gallup, N. Mex., Klamath Falls, Oreg.-----	16274
Indianapolis, Ind.-----	7154, 14452
Los Angeles, Calif.-----	12789, 14458
New Jersey, Northern-----	7157, 12784
New York, N.Y.-----	1164, 7149
Orlando, Fla.-----	10891, 14456
Philadelphia, Pa.-----	5437, 12782
Pittsburgh, Pa.-----	7155, 14453
Portland, Maine-----	7158, 14454
St. Louis, Mo.-----	7159, 12785
San Francisco, Calif.-----	7147-48
Seattle, Wash.-----	7153, 12783
small cities in southern region, Cleveland, Tenn., etc.-----	14460
Washington, D.C.-----	1163, 14451, 16273
consumer expenditures and income, 1961— Dayton, Ohio-----	19788-789
Hartford, Conn.-----	19790-791
Nashville, Tenn.-----	19786-787
USSR, social and cultural measures, preventing inefficiency-----	12425
see also Finance—also subject for which expenditures are made.	
Expenditures of United States Government: combined statement, 1962-----	1612
monthly statement-----	3924

# JANUARY-DECEMBER

	Entry		Entry
Experienced workers, <i>see</i> Labor.		Export control act of 1949, <i>see</i> Exports.	
Experiences with submarine atmospheres	7188	Export Expansion, White House Conference on, <i>see</i> White House Conference on Export Expansion.	
Experiment stations, <i>see</i> Agricultural experiment stations — <i>also</i> names of stations.		Export-Import Bank of Washington:	
Experimental Data Processing and Display Facility, National Aviation Facilities Experimental Center, Atlantic City, N.J., functional description of laboratory	18344	audit report, 1962—	
Experiments and experimentation:		departmental edition.....	10255
animal cerebral cortex.....	19471	document edition.....	11759
experimental design work, USSR, legal aspects.....	17997	cotton export financing.....	15542
experimental statistics, handbook.....	18187	foreign operations appropriations, 1964, hearings.....	18918
experiments on human beings in modern foreign medicine, USSR translation.....	19710	increase lending authority and increase life—	
high school students, water intake by soil.....	14877	hearings.....	7987, 10001
humane treatment of animals used in research, provided, hearings	294	law.....	17031
plutonium-239, Soviet, articles.....	2708	reports.....	6165
Explanatory bulletins, Wage and Hour and Public Contracts Divisions.....	14770-771, 18362	9868, 13583, 13700, 15239, 15293.	
Explorations:		loan and guarantee operations—	
assistance, Minerals Exploration Office program.....	12821	report, July 1-Dec. 31, 1961.....	9834
explorers' routes, trails and early roads in U.S., maps, list.....	1192	report, Jan. 1-June 30, 1962.....	17072
geochemical, analytical methods used by Geological Survey.....	2343	semiannual report.....	8199
marine geophysical, USSR report.....	6860	Export trade, <i>see</i> Commerce.	
<i>see also</i> Outer space.		Exporters:	
Explore the woodland, Rock Creek Nature Center, Washington, D.C.....	1351	denial of export privileges, regulations.....	14068
Explorer, <i>see</i> Satellites.		U.S. cattle, guide.....	1679
Explosions:		Exports:	
compressor, causes.....	18075	agricultural exports under Government financed programs.....	6319
gas, hazards associated with bulk storage of molten sulfur.....	7221	agricultural trade expansion (address).....	20273
hazards of flight vehicle combustibles, review.....	5470	airborne, foreign trade reports.....	3735-36
physics of seismology, USSR studies.....	16099	BDSA export potential study (series).....	16870
static electricity accumulation on arctic clothing.....	14912	challenge of foreign markets for economic growth (address).....	6047
tear test studies of high strength quenched and tempered steels.....	12953	commercial importers, exporting to United States.....	12032
<i>see also</i> Atomic bombs—Detonations—Nuclear explosions.		comprehensive schedule.....	8376
Explosive forming, ASTIA report bibliography.....	4438	control—	
Explosives:		carrier's role.....	12252
explosion welding, theory of cumulative processes.....	7299	hearing.....	15303
Federal Item Identification guides for supply cataloging, supplements.....	3660	quarterly report.....	3632
of military interest, properties, AMC engineering design handbook.....	20324	regulations, comprehensive schedule.....	8376
ordnance, disposal, technical manual.....	113	regulations, summary.....	6622
power-activated tools on Capitol grounds, permit use, hearing.....	2057	credit insurance and guarantee programs.....	14071
propagation velocities, electrical method for continuous measurement.....	9123	current export bulletin.....	3573
publications, price list.....	18280	expansion—	
rock bolt anchored by explosive forming.....	14515	and control (remarks).....	8421
safety, covering laboratory, pilot plant, and production operations.....	1373	developing opportunities (remarks).....	18355
supply facilities, Yards and Docks Bureau design manual, change.....	1601	for peace and prosperity (remarks).....	6054
<i>see also</i> names of explosive substances.		Government's share in program (address).....	6623
		importance to U.S. economy (remarks).....	6055
		program, problems and opportunities open in international trade field (address).....	18747
		vital national goal (address).....	18749
		exporting, how-to-get-started handbook.....	632
		fact sheet.....	10054
		facts.....	19359
		foreign trade reports.....	3732-33
		foreign trade, summary reports, monthly.....	4258-67
		fruit acts, regulations established.....	6
		licenses approved and reexportations authorized, list.....	3633
		low cost marketing aids for higher profits, services available through Commerce Department field offices.....	19354
		manufactured products, survey of origin, 1960, current industrial reports.....	7760

## INDEX 1963

	Entry		Entry
Exports—Continued		Extrusion processes—Continued	
marketing problems (address)-----	15545	optimum methods for primary working of refractory metals....	7648
privileges, denial and probation orders currently affecting. 5056,	17553	refractory alloys, extrusion, etc., steel extrusions, improved methods, etc., for producing.....	9613, 18488
privileges, denial, regulations.....	14068	Exurban development in selected areas of Appalachian Mountains .....	12049
relation to U.S. production, 1961..	2396	Eyes:	
relation to U.S. production, 1962..	17561	Examination, comparison of sight-screener and Sloan letter chart .....	14673
selling around world, how Commerce helps.....	7810	glaucoma test, protective assurance of vision.....	11240
small firms, marketing manual.....	13042	mammalian, radiation effects, literature survey.....	18591
tax policies to make more competitive (remarks).....	12123	visual accommodation, ciliary muscle, neural control.....	15022
total trade, summary reports, monthly.....	4265	<i>see also</i> Ophthalmology—Retina.	
trade by commodity, summary reports, monthly.....	4250	Eyles, Don E., aquatic plants of southeastern United States.....	6451
trade by country, summary reports, monthly .....	4260	F	
trade by customs district, summary reports, monthly.....	4261	F.A.A., <i>see</i> Federal Aviation Agency.	
trade education program, curriculum guide.....	15436	F.A.O., <i>see</i> Food and Agriculture Organization of United Nations.	
U.S. commodities as related to output, 1961 and 1960.....	4595	F.C.C., <i>see</i> Federal Communications Commission.	
what you should know about exporting, how to get started, handbook .....	6024	F.C.S., <i>see</i> Farmer Cooperative Service.	
<i>see also</i> Commerce— <i>also</i> names or classes of articles exported— <i>also</i> names of countries, etc.		F.D.C. regs.....	4975, 10203, 12143-145
Exposure, <i>see</i> Cold.		F.D.I.C., <i>see</i> Federal Deposit Insurance Corporation.	
Expropriation, American-owned property by foreign governments in 20th century, report.....	18935	F.H.A., <i>see</i> Farmers' Home Administration—Federal Housing Administration.	
Ex-servicemen, <i>see</i> Veterans.		Flavor, <i>see</i> Earth—Ionsphere.	
Extension Service, Federal, <i>see</i> Federal Extension Service.		F.P.C., <i>see</i> Federal Power Commission.	
Extension work:		F.P.C. R series.....	19'92
agricultural, laws, compilation.....	216	F.P.C. S series.....	506,
career exploration, guide for extension workers.....	4371	2265, 4902, 8241, 13915,	19193
cooperative service with low income families in low rent public housing .....	20602	F.R.L., <i>see</i> Feltman Research Laboratory.	
education, communication and organization for action in rural areas (address).....	14888	F.T.C., <i>see</i> Federal Trade Commission.	
Federal-State relations and Cooperative Extension Service.....	492	FAA, <i>see</i> Federal Aviation Agency.	
food demonstration with tips for TV, guide.....	5837	Fabricated materials, nonmetallic, Federal item identification guides for supply cataloging, supplements .....	3658
national cooperative dairy herd improvement program, handbook for extension workers.....	18416	Fabrication, <i>see</i> names of materials fabricated.	
training around world, handbook.....	491	Fabricius, E. D., solid state solar generator .....	5873
Extraction (chemistry):		Fabrics, <i>see</i> Fence fabrics—Textiles— <i>also</i> names of fabrics.	
alumina from ferruginous bauxite by double-leach process.....	18098	Fabry and Perot interferometer, resonator in LASER oscillators.....	7605
manganese from low-grade dolomitic materials by roast-leach process .....	3079	Face fly, <i>see</i> Flies.	
solvent—		Facilities and equipment fact sheet (series) .....	13158
beryllium from Spor Mountain ore .....	5499	Facilities planning factors for naval shore activities.....	16698
chelating agents in separation of rare-earth compounds with amines .....	7226	Factor analysis:	
cobalt and nickel.....	5486	hierarchical factors in course grades in aviation high school.....	4407
metallurgical application process, fundamentals .....	1205	use in statistical analysis of multiple time series.....	4419
repeated automatic extraction of porous solids with hot solvent.....	16802	<i>see also</i> Factorial experiment designs.	
Extraction apparatus:		Factorial experiment designs, method of complete confounding of interactions with sub-blocks in factorial experiments with 2,3,4,5 levels of each factor, Polish study.....	2799
determination of total serum lipids, repeated automatic extraction of porous solids with hot solvent.....	16802	Factories:	
Extracts, <i>see</i> substances from which extracts are made.		average weekly earnings reach \$100 .....	18045
Extremal control system, USSR.....	2648	fed by farmers.....	4889
Extrusion processes:		labor turnover, monthly release.....	3623
Dynapak extrusion of I & E fuel elements .....	18565		
electron-beam-melted tungsten, mechanical properties, investigation .....	12857		



# JANUARY-DECEMBER

	Entry		Entry
Factors influencing agency effectiveness	11376	Falanga, Ralph A., free-flight heat-transfer investigation at supersonic speeds of 2 slender cone cylinder bodies at angle of attack of 8° with one body rotating	14541
Facts about nutrition	9223	Fall out, see Radioactivity.	
Facts of life and death, selected statistics on Nation's health and people	20094	Fall River County, S. Dak.:	
Facts on aging series	5039-40, 9505-6, 11409, 20247	Angostura quadrangle, geology---	6544
Faculty (schools):		Burdock quadrangle, geology---	10275
college, status and career orientation, 1962-63, survey	2171	Fallot's tetrad, see Heart diseases.	
institutions of higher education, statistics, 1957-58	2144	Fallout, see Radioactivity.	
instructional staff in institutions of higher education, projections, 1970-71	15432	Falvey, J. P., NAREC program for least square error curve fitting	3230
land-grant institutions, half-century of salaries, changes	368	Falwell, R. C., precision endless-loop, magnetic tape recorder for space applications	5579
professional staff in institutions of higher education, 1st term, 1959-60	17373	Familial aggregation of lung cancer among hospital patients	12991
professional staff in public elementary and secondary schools, aims, 1959-69	6349	Families:	
professional staffing for higher education, 10-year objectives, 1960-70	6350	AFDC, 4 in every 100 get help---	20655
Fading correlation bandwidth and short-term frequency stability measurements on high-frequency transaural path	5620	and persons in U.S., income, 1961, by type, 1963, population characteristics	15071
Fahnestock, George R., logging slash flammability after 5 years	10215	characteristics and marital status, workers, Mar. 1962	9078
Failure mechanisms in silicon semiconductors	11513	characteristics of long term unemployed, 1961-62	4832, 6354, 12084
Fair employment practice, see Discrimination in employment.		family economics review	3638
Fair Employment Practice Commission, create, hearings	17323	family status, population characteristics	7761
Fair Employment Practice Committee, records, preliminary inventory	1327	farm family employment, 1910-59	16763
Fair labor standards act, see Labor standards.		financial management, helpful information	13168
Fair Play for Cuba Committee:		food---	
Castro's network in United States, hearings - 10019, 12022, 15393, print additional copies, report	17289	families with school children	16737
Greater Los Angeles Chapter, Communist and Trotskyist activity, report and testimony, additional copies, report	11857	family with young children	4353
Fairbanks, Alaska:		plans and costs	1698
frost heaving of piles	10278	guard against accidents	20095
ground water resources of area	8344	home conditions hazardous to children, AFDC program to protect	19155
International Airport, weather observations, hourly, decennial census	7511	home economist services to families with mental retardation, study	9732
Fairbanks, Morse & Co., overpricing of K-27 tube sheet assemblies, GAO report	19284	in United States, 1960, census of population	1885
Fairfax, Va., quadrangle, geology and ground water resources	609	income---	
Fairfax County, Va.:		average, 1962	13300
farm taxes on rural-urban fringe, case study	10053	trends, 1947-60	13304
soil survey	13051	interim revised projections of number of households, 1965-80	7762
Fairfield, Conn.:		living in public housing, health, education, and welfare services	19339
hurricane survey, engineer report—departmental edition	2196	low-income---	
document edition	2017	improving home and family living	10304
Fairs:		in low rent public housing, cooperative extension service work	20662
International trade fairs 1963, list	2381	medical and dental expenditures, development of questionnaire	14674
mobile trade, assistance to promote foreign commerce, hearing	298	needy, with dependent children, aid	20654
Fairweather Range, Alaska, 2 layered gabbro stocks, geology and petrology	10279	nonwhite, homeowner properties, census, 1960	13306
Fake medical devices, FDA reports	8286, 20690	parents of mongoloid children, problems	7770
		population characteristics, Mar. 1962	18687
		public assistance under social security act, monthly cost standards used by States, Jan. 1961	3328
		research relating to children, studies in progress	176, 11647
		unpaid employment, estimating, handbook	19126
		with dependent children, receiving aid eligibility sampling Jan.-Apr. 1963	20746
		see also Income.	
		Family farms, see Farms.	
		Family Services Bureau, memorandum of understanding with voluntary organizations for civil defense emergencies	21178

Do not order from index; see indicated entry

Page 247

# INDEX 1963

Entry	Entry
Fancher, P. S., engine simulation methods for operational flight trainers..... 18227, 19998	Farm implements and machinery—Con.
Fandaoutsaki, Evangelia G., <i>see</i> Baker, Eva.	USSR industrial development, translations..... 840, 872, 902, 976,
Fannie Mae, <i>see</i> Federal National Mortgage Association.	1009, 1106, 2473, 2635, 2782,
Fanning, John H.: addresses—	2919, 2939, 5190, 5345, 6654,
Jan. 24, 1963..... 5630	6664, 7010, 8675, 8743, 8985,
Mar. 5, 1963..... 7321	10381, 10422, 10540, 10602,
Fans, <i>see</i> Electric fans—Mechanical fans.	10664, 12283, 12325, 12551,
FAO, <i>see</i> Food and Agriculture Organization of United Nations.	12645, 14132, 14138, 14255,
Far East, <i>see</i> East (Far East).	15695, 15702, 15757, 15792,
Far infrared bibliography..... 12948	15795, 15807, 15822, 16018,
Farberow, Norman L., suicide among general medical and surgical hospital patients with malignant neoplasms..... 9478	16126, 16198, 16221, 16228,
Farbsteln, Leonard, Arab refugees from Palestine, report..... 7957	17660, 17750, 17765, 17804,
Fargo, N. Dak., Hector Airport, weather observations, hourly, decennial census..... 21169	17998, 19694, 19715, 20791,
Faris, Gene, improving learning environment, local preparation of visual instructional material..... 20636	20821, 20873, 20898.
Farkas, Ann (Anka) B., relief..... 13471.	wheat growers' machinery costs, North Dakota..... 6315
Farkas, John (Ivica) B., relief..... 13471.	Farm income, <i>see</i> Income.
Farm animals, <i>see</i> Livestock.	Farm index (periodical)..... 356, 3640
Farm buildings: building plans—	Farm Labor: Brazil, rural unionization..... 2583
cabin, frame, slab-on-grade construction..... 7577	child labor provisions of fair labor standards act, extend to agricultural employment—
diary barn fallout shelter..... 20288	hearings..... 10021
fallout shelter and storage areas..... 36	report..... 11970
garages..... 11462	employment trends and training needs..... 16266
hay storage and feeding shed..... 13183	family and hired workers, 1910-59 farmwork, safety, and you, discussion for youth leaders, teachers, etc..... 5433
3 bedroom farmhouse, with basement..... 1713	hired working force, 1961..... 12042
3-stall milking plant for 20-40 cows..... 14879	correction..... 20624
construction guide supplement, farm labor housing..... 8210	education, skill level and earnings..... 6317
cooperative farm building plan exchange (series)..... 38, 1711-13, 7577.	housing—
11462, 13183, 14879, 20288	construction guide..... 8210
fire emergency plan..... 14896	labor camp standards..... 9035
Farm credit, <i>see</i> Agricultural credit.	local Employment Service and claims offices, directory..... 19127
Farm Credit Administration: appropriations, 1964—	man-hours used in production of livestock, estimates, 1959..... 18444
hearings..... 9921, 17301	market developments..... 3642
reports..... 11816, 17294	employment and wage supplement..... 3643
audit report, 1962..... 15180	Mexican farm labor program extend—
circulars..... 2236, 10098	hearings..... 9917, 17159
report, 1962—	reports..... 9887, 9915,
departmental edition..... 10097	13788, 15362, 17139, 18900
document edition..... 9830	migratory—
Farm employees, <i>see</i> Farm labor.	community efforts to improve conditions, guide..... 14447
Farm equipment, <i>see</i> Farm implements and machinery.	contractor registration—
Farm equipment stores, <i>see</i> Stores.	hearings..... 10021, 11895
Farm houses, <i>see</i> Farmhouses.	reports..... 11819, 11972
Farm implements and machinery: automatic driving units, study by simulation, USSR study..... 5398	day-care services for children—
current industrial reports..... 3575, 4578	hearings..... 10021
Federal item identification guides for supply cataloging, supplements..... 3653	report..... 11968
hog-lot equipment..... 13166	improve educational opportunities—
industry, outlook for 1963 and review of 1962..... 5970	hearings..... 10021
machine for picking up filled grape boxes..... 14836	report..... 11971
planter-sprayer assembly for precision placement of herbicides in cotton rows..... 18400	Interstate transportation, ICC regulations..... 12269
price and questions of effectiveness traction, publications list..... 9	Mexican workers, agreement with Mexico..... 1529, 13074
	problem in U.S., report..... 9982
	sanitary facilities, provide, hearings..... 4789
	sanitation facilities—
	hearings..... 10021
	report..... 11969
	selected references..... 6343
	monthly report..... 3641
	safety tips..... 20925
	Soviet agricultural workers, awards..... 15740
	Spanish-American wage workers on U.S. farms, economic, social, and demographic characteristics..... 8144
	utilization in USSR, statistics..... 8798
	Farm loans, <i>see</i> Agricultural credit.

# JANUARY-DECEMBER

	Entry
Farm machinery, <i>see</i> Farm imple-	
ments and machinery.	
Farm management, <i>see</i> Farms.	
Farm mechanics, <i>see</i> Mechanization.	
Farm mortgages, <i>see</i> Agricultural	
credit—Mortgages.	
Farm ponds:	
manure disposal lagoons.....	16713
sealing in Ozark highlands, etc....	14833
Farm prices, <i>see</i> Prices.	
Farm products <i>see</i> Agricultural prod-	
ucts—also names of products.	
Farm relief, <i>see</i> Agriculture.	
Farm silos.....	18436
Farm supplies, production, major re-	
gional cooperatives, handbook	4877
Farm supply cooperatives, <i>see</i> Farm-	
ers' cooperative associations.	
Farm tenure, <i>see</i> Land tenure.	
Farm work, <i>see</i> Farm labor.	
Farm youth, <i>see</i> Youth.	
Farmakologiya i toksikologiya (peri-	
odical):	
articles.....	12072-73
translations.....	12658, 15743
Farmer, Evelyn M., United States De-	
partment of Commerce publi-	
cations, 1962 supp.....	18760
Farmer, Janet L., relief. 9851, 16983,	17216
Farmer Cooperative Service:	
appropriations, 1964, Agriculture	
Dept., hearings.....	7979
FCS circular.....	2238
general reports.....	4877,
6379-80, 8204, 10099, 12093,	
15461-463, 17416, 19158, 20656.	
Information series.....	6381-82,
8205-7, 10100, 12094, 19159	
publications, list.....	19159
way it works.....	10100
Farmers:	
American, scientific accomplish-	
ments (address).....	18
cash expenditures for production	
supplies and equipment, by	
States, 1960.....	2237
civil defense farm emergency action	
planning steps.....	10144
emergency plans of Government,	
concern of everyone.....	10140
family, loans for recreational en-	
terprises.....	471
farm people and old-age survivors,	
and disability insurance in	
U.S., nature and scope of pro-	
gram.....	11285
feed our factories.....	4889
income-producing recreational fac-	
ilities, liability and insurance	
protection.....	15418
insurance facts.....	13165
loans for shifts in land use.....	470
population, facts and trends.....	2259
prices paid for seed, spring aver-	
ages, 1926-61, etc.....	7582
self-employed, are you getting your	
social security credit?.....	1376
social security, are you getting	
credit due you?.....	18314
stake in wheat referendum (ad-	
dress).....	1696
<i>see also</i> Farmers' cooperative orga-	
nizations.	
Farmers' bulletins.....	24-25,
1690-95, 4349-51, 5818-19,	
7560-64, 9568-70, 13165-166,	
14855-857, 16735-736, 18422.	
Farmers' cooperative organizations:	
adjustable revolving capital plan.....	12093
broiler and turkey feed financing.....	20656
contributions to agricultural well-	
being.....	12094
cooperative destiny, it's up to you!	
(talk).....	6381

	Entry
Farmers' cooperative organizations—	
Continued	
court cases, summary, legal series.....	4220
current challenges, income tax	
problems, etc.....	10101
dairy cooperatives, impact on Fed-	
eral order milk markets.....	15462
directors, understanding duties and	
responsibilities, true-false	
test.....	2239
eastern, lawn and garden services.....	6379
effectiveness in agricultural econ-	
omy (remarks).....	1689
how they can contribute to rural	
development?.....	6382
motortruck operations.....	10099
new challenges, effects of wheat ref-	
erendum (address).....	5810
news for farmer cooperatives.....	3966
reprints.....	469,
2239-40, 6383, 8208, 10101	
Oklahoma cotton cooperatives.....	6380
plunkett Foundation overseas	
courses.....	8208
power in partnership, new dimen-	
sions in cooperation (ad-	
dress).....	18443
production supplies, major regional	
cooperatives, handbook.....	4877
regional, handling under \$10 mil-	
lion of supplies, 1960-61.....	15463
statistics, 1960-61.....	15461
stepping stones to good member re-	
lations.....	8205
trends in growth, 1950-60.....	8204
way Farmer Cooperative Service	
works.....	10100
what are patronage refunds?.....	8207
<i>see also</i> names of organizations.	
Farmers Home Administration:	
appropriations, 1964, Agriculture	
Dept., hearings.....	9921
farm-mortgage lending experience.....	2136,
6318, 15422	
loan programs and rural renewal.....	472
loans, general information.....	5839
record, 1962.....	8209
Farmhouses:	
design and equipment for summer	
comfort.....	9563
farm building plans—	
cabin, frame, slab-on-grade con-	
struction.....	7577
1-bedroom, slab on grade, frame	
construction.....	1711
2-bedroom, masonry construc-	
tion.....	1712
3-bedroom farmhouse, with base-	
ment.....	1713
3-bedroom, slab on grade, ma-	
soney construction.....	38
fire emergency plan.....	14896
Farming, <i>see</i> Agriculture.	
Farms:	
Central and Southern States, fall-	
out facilities and fuels.....	13092
commercial wheat, Pacific North-	
west, Northern and Southern	
Plains, costs and returns,	
1962.....	15413
cost situation.....	10056
costs and returns.....	2123,
10050, 12045-46, 15412-413	
commercial, by type, size, and	
location.....	16731
commercial cotton farms.....	12046
costs and returns, 1962—	
commercial corn belt.....	8146
commercial cotton farm, 1961....	2123
commercial egg-producing farms,	
New Jersey.....	10050
commercial tobacco, North Caro-	
lina.....	12045

# INDEX 1963

	Entry		Entry
Farms—Continued		Fatty acids:	
family farm, hearings.....	17154	composition of plasma and liver	
farm enterprise input-output data		lipid components as influenced	
publications, list.....	10059	by dietary protein and cholesterol	1811
farm program, continue and		detergency of 12 to 18 carbon saturated fatty acids.....	12963
strengthen (statement).....	1724	unsaturated, and their esters, polymerization and copolymerization	16714
irrigation water, distribution, etc.,	13178	Faucett, Philip M., management audit for small manufacturers.....	7428
land in farms, U.S. 1950-63, by States, 1961-62.....	9446	Faucher, G. A., upper atmosphere density obtained from falling sphere drag measurements.....	11479
lightning protection.....	7563	Faught, C. K., remarks, May 17, 1963.....	9791
management—		Faulkner, Rafford L., remarks, June 14, 1963.....	11594
Agricultural Economics Bureau records.....	7309	Fauna, enrichment in reservoirs, USSR study.....	6723
publications, price list.....	11225	see also Fresh-water fauna—Mammals—Marine fauna—Vertebrates.	
management supervisor, examination announcement.....	16956	Faust, George T., physical properties and mineralogy of samples of sediments from vicinity of Brookhaven National Laboratory.....	17526
mortgage debt and taxes, report.....	1901	Faust, W. R., solutions to three-dimensional equation of radiation transport.....	11176
number in U.S., 1950-63, by States 1961-62.....	9446	Fay, Elmer R., sr., relief.....	19006
operating loans for better farming, etc.....	5836	Fayette County, Pa., pilot food stamp program, effect on retail food store sales.....	8145
policy alternatives, programs.....	10124	Fayetteville, Ark.: land transfer to—	
population—		law.....	20431
estimates, Apr. 1962.....	6004	reports.....	6236, 18869
series Census ERS.....	6004	population, special census.....	162
production and efficiency changes, summary report, 1963.....	14891	FBI, see Federal Bureau of Investigation.	
real estate—		FCC, see Federal Communications Commission.	
market developments.....	3644	FCR series.....	2123, 8146, 10050, 12045-46, 15412-413.
taxes, recent trends and developments.....	2137, 20627	FCS, see Farmer Cooperative Service.	
safety week.....	7579	FDA, see Food and Drug Administration.	
tourism in small family farm areas (paper).....	2141	FDIC, see Federal Deposit Insurance Corporation.	
type, census of agriculture, 1959, general report.....	171	Feathers:	
USSR, supplemental wages on experimental - demonstration farms.....	2531	and down, disposal from national stockpile—	
see also Homesteads—also headings beginning Farm.		hearings.....	18921, 18924
Faroe Islands, air navigation services, joint financing, agreement with other Governments.....	14724, 16591	law.....	20435
Farrar, C. L., large cage-design for insect and plant research.....	9539	reports.....	15361, 18840
Farrenkopf, Thomas O., Montana Christmas tree exports decline for 3d straight year.....	20698	chemical modification—	
FAS-M series.....	4977, 6477-78, 10207, 12148-149, 13981, 15542-544, 20692	Tan-O-Quil-QM process.....	11252
Fast reactors, see Reactors (atomic).		Werner type chromium complexes.....	12253
Fat:		Feces, bile acid and sterol excretion of rats, effect of dietary pectin and saponin.....	11549
consumption in Calanus, USSR study.....	16136	Fecundity:	
content of some mass Black Sea planktonic algae grown in cultures.....	17738	mouse fertility, effect of centimeter radio waves.....	19502
human body, measurement methods.....	16803	population, census 1960.....	7747
see also Fats.		Feder, William A., Thielaviopsis basicola associated with declining sweet orange seedlings in Florida.....	20270
Fat embolism, see Embolism.		Federal agencies, see Government offices.	
Fathometers, ocean depths measured, use of Ladoga, apparatus for recording, USSR study.....	6795	Federal aid, see Grants-in-aid—also subjects.	
Fatigue, see Anti-fatigue drugs.		Federal airport act, see Airports.	
Fatigue of materials, see Strains and stresses.		Federal Aviation Agency:	
Fats:		air traffic activity—	
current industrial reports.....	8574, 7756	summary, 1962.....	8216
change.....	11619	summary, 1963.....	17421
production, consumption, etc., summaries.....	1891, 16894	aircraft accident report.....	7772
fats and oils situation.....	3645	airspace closure, Project Sedan.....	11572
food fats and oils, outlook 1962-63 (remarks).....	2140		
foreign agriculture circulars.....	3720		
high fat diet, effect on theanine excretion and plasma cholesterol.....	1761		

# JANUARY-DECEMBER

	Entry
Federal Aviation Agency—Continued	
airway and flight procedures inspection program	20661
airworthiness directives—	
biweekly	3635
summary	17427
appropriations, 1964, hearings	18919
aviation forecasts, fiscal years	
1963-68	2241
budget, 1964, amendment	13460
civil aeronautics manuals	474-476, 2242, 6389-90, 8212-13, 10105, 13892, 15465, 17418, 19561
status	481, 4884, 12096
civil air regulations	6391, 15466
amendments	2243-45, 4879-80, 6392, 8214-15, 10106-109, 15467, 17419, 19162-163, 20657
contractions used in air traffic control, etc., handbook	9641
definitions and abbreviations, Federal aviation regulations	13894
efficiency and economy in operation, hearings	2050
enforcement procedures	13895
establishment, text of 1958 act	18712
FAA handbook series	477, 4882, 6393, 8217-18, 10110-111, 12095, 13893, 15468-471, 19164-169, 20658-659
facilities, operational radiological recovery procedures, handbook	8217
Federal aviation regulations	478-480, 2247-52, 4883, 8219, 10112-113, 13894-901, 15473, 17423-424
status	481, 4884, 12096, 20660
field facility directory	15474
master index, manufacturer's identifying number and Government specification type designators	2246
press releases	4047
publications, Oct. 1963, list	19170
regulations of administrator	485, 8220, 13902, 17427
report, fiscal year 1962	6394
rule making procedures, FAA regulations	8219
safety in construction, etc., handbook	6393
SRDS organization handbook	15470
statistical handbook of aviation	17422
sundry nominations, hearings	2090
technical reports, consolidated abstracts, 1957-62—	
general distribution	14738
Government distribution	13093
technical standard order TSO (series)	8221, 13903
written examination guide, ground instructor instrument	2303
Federal Banking Commission, establish, hearings	20496
Federal buildings, see Public buildings.	
Federal Bureau of Investigation, director, presidential appointment of successors, provide, report	11980
Federal careers	18734
directory, guide for college students	4623, 16945
service at your service	6030
Federal civil defense guides	9737-38, 13316, 16924-933, 20374-375
Federal civil service, see Civil Service.	
Federal Coal Mine Safety Board of Review:	
appropriations, 1964—	
law	15158
reports	7939, 11951, 13616
member, nomination of Trevorrow, George C., hearing	8127

	Entry
Federal Commission on Disposition of Alcatraz Island:	
establish—	
law	20427
reports	9864, 19015
Federal Communications Commission:	
actions in docket cases, reports	3646
actions on motions, reports	3646
amateur service, FCC rules and regulations	10120, 15480
appropriations, 1964, hearings	18919
authorization for certain nonbroadcast operations—	
hearings	19049
report	19007
decisions and reports—	
July 14, 1961-Jan. 5, 1962	8222
Jan. 12-June 29, 1962	10115
weekly	3647
hearing calendars	3646
instructions in docket cases	3646
maritime services, radio stations on land, shipboard, etc., rules and regulations	6398, 10119
member, nomination of—	
Cox, Kenneth A., hearings	6291
Loevinger, Lee, hearing	12013
memorandum opinions, etc.	3895
nonbroadcast and general actions, reports	3646
organization, FCC rules and regulations	487, 2257, 6396, 8223, 12098, 15479
patent practices, preliminary report	332
petitions for intervention before FCC—	
hearings	19049
report	19008
policy on local live programming (address)	13905
power to improve broadcast programming based on public support (address)	12097
practice and procedure, FCC rules and regulations	487, 2257, 6396, 8223, 12098, 15479
press releases	4048
progress report on telephone rates, etc., hearings	10004
public notices	3646, 4048
radio broadcast services, rules and regulations	488, 6397, 10118, 12099
report, 1962	2255
responsibilities and problems (address)	2253
role in recent developments in communications industry (address)	10114
rules and regulations	487-488, 2257-58, 4886-87, 6396-99, 8223-24, 10117-121, 12098-100, 13906-907, 15479-481
sundry nominations, hearings	2090
Federal Council for Science and Technology, natural resources, research and development, report	20122
Federal courts, see Courts of United States.	
Federal Credit Programs Committee, report	7389
Federal credit unions:	
accounting manual	489
act—	
amended to Nov. 30, 1959 (in Spanish)	6400
amended to Mar. 31, 1963	10122
amendments—	
law	20433
reports	15284, 19011
ley federal de cooperativas de credito	6400
28 years of better living, anniversary report, 1962	13908



# INDEX 1963

	Entry
Federal Crop Insurance Corporation:	
appropriations, 1964, Agriculture Dept., hearings-----	9921
audit report, 1962-----	13992, 15185
wheat program, what crop is really worth to you-----	13909
Federal Dairy Advisory Committee, create, hearings-----	11869
Federal Dairy Stabilization Board, create, hearings-----	11869
Federal Deposit and Savings Insurance Board, establish, hearings-----	20496
Federal deposit insurance act, see Banks and banking.	
Federal Deposit Insurance Corporation:	
annual report, 1962-----	12101
audit report, 1962-----	7853
GAO review-----	4997
deposits and share accounts, increase maximum coverage for each depositor, hearings-----	15304
establish Federal Deposit and Savings Insurance Board to manage FDIC, hearings-----	20496
insured banking offices, list-----	6401
changes-----	3871
press releases-----	4049
report series-----	490, 12102
Federal Disability Insurance Trust Fund, see Board of Trustees of Federal Old-Age and Survivors Insurance Trust Funds.	
Federal employees, see Government officials and employees.	
Federal Employees, National Federation of, see National Federation of Federal Employees.	
Federal employment, see Employment.	
Federal Employment Opportunity Commission, establish, report-----	15233
Federal expenditures, see Finance.	
Federal Extension Service:	
appropriations, 1964, Agriculture Dept., hearings-----	7979
circulars-----	20662-663
Extension Service review (periodical)-----	3634
Federal-State relations and Cooperative Extension Service-----	492
Federal fair employment practice act, see Discrimination in employment.	
Federal Fire Council:	
fire experience, 1961-----	2336
library material received-----	3863
minutes of meetings-----	8327, 15601
recommended practices series-----	10272
Federal Government, see Government.	
Federal guidance for State and local civil defense, FG series-----	7777, 18713
Federal Hall National Memorial, general information-----	5635
Federal Home Loan Bank Board:	
accomplishments (remarks)-----	493
appropriations, 1964, hearings-----	18919
audit report, 1962, GAO review-----	4998
digest-----	3649
index-----	2260
investigation and study-----	
Alice, Tex., report-----	13571
Atlanta, Ga., hearings-----	2049
member, nomination of John E. Horne, hearing-----	15377
recent and proposed regulations (remarks)-----	10149
releases-----	4050
report, 1962-----	19173
revisionist process, techniques, etc. (address)-----	494

	Entry
Federal Home Loan Bank System:	
combined financial statements, 1962-----	
member savings and loan associations advance highlights-----	15484
members of Federal Home Loan Bank System, assets and liabilities-----	20664
recent and proposed regulations (remarks)-----	10149
reconsideration (address)-----	19172
Federal home loan banks:	
audit reports, 1962-----	4999, 7855
operations, 1962, report-----	19173
Federal Housing Administration:	
air travel by personnel, GAO review-----	5004
experience with mortgage foreclosures and property acquisitions, report-----	4893
FHA news release-----	4051
FHA regulations-----	503-504, 4895-98, 8234, 10154, 13910, 15487-488, 19176-183.
financing for home purchases and home improvements, guide-----	4894
home mortgage insurance, fact sheet-----	6404
how to do business with FHA, message to builders, fact sheet-----	502
insurable loans, digests-----	4892, 17430
laws, national housing act, text, amendments-----	8236
manual, mortgagee's handbook, home mortgage programs, revision-----	4899, 6405
minimum property standards for urban renewal rehabilitation-----	13913
mortgage insurance for urban renewal, fact sheet-----	10153
mortgage insurance program for urban renewal housing, need to revise procedures in administration, GAO report-----	20718
multifamily rental housing mortgage insurance, amend act, report-----	15285
new home improvement programs-----	2261
nursing-home mortgage insurance general information-----	15490
rental housing program, what it is, how it works-----	12110
self-insurance on acquired multifamily property, hearing-----	13643
technical studies, list-----	17431
technical studies program (series)-----	13911
underwriting procedures, multifamily mortgages manual-----	19185
Federal item identification guides for supply cataloging, supplements-----	3650-60
Federal jobs overseas-----	4627
Federal land bank associations, report, 1960-----	468
Federal land banks, farm-mortgage lending experience-----	2136, 6318, 15422
Federal lands, see Public lands.	
Federal manual for supply cataloging-----	8138
Federal Maritime Board:	
decisions-----	
Jan. 1947-Feb. 1952-----	15491
Apr. 1952-Mar. 1956-----	19186
member, nomination of Ralph E. Wilson, report-----	20541
tariff schedules, suspension, extend time, hearings-----	297
Federal Maritime Commission:	
appropriations, 1964-----	
hearings-----	11874
report-----	11848
commissioner, nomination of Ashton C. Barrett, hearings-----	15378
decision, separates-----	19187

# JANUARY-DECEMBER

	Entry		Entry
Federal Maritime Commission—		Federal regulations, <i>see</i> Code of Federal regulations— <i>also</i> subjects.	
Continued		Federal Republic of Cameroun, <i>see</i> Cameroun.	
member, nomination of Ashton C. Barrett, report.....	18970	Federal Republic of Germany, <i>see</i> Germany.	
news releases NR series.....	4052	Federal reserve agents fund, transactions.....	3792
progress report, hearing.....	295	Federal Reserve Bank of San Francisco, disappearance of U.S. securities from vault, report.....	11815
regulatory aspects of governmental contracts with maritime industry (remarks).....	19189	Federal reserve banks:	
regulatory responsibilities to encourage export of American goods to find new markets, etc. (remarks).....	19191	condition, weekly statement.....	3636
report—		interdistrict settlement fund, transactions.....	3792
departmental edition.....	4900	issue and cancellation of capital stock, regulation I.....	4926
document edition.....	4711	San Francisco, disappearance of \$7.5 million U.S. Government securities, investigation, hearing.....	9927
role in regulation and promotion of trade (address).....	19188	State member banks, 1962, list.....	4927
SP series.....	505, 2262-63, 4901, 10155-160, 12112, 19188-191	<i>see also</i> other headings beginning Federal reserve.	
sundry nominations, hearings.....	2090	Federal reserve bulletin.....	3671
Federal Mediation and Conciliation Service:		Federal reserve chart book:	
appropriations, 1964—		financial and business statistics.....	3672
hearings.....	7981	historical supplement.....	20677
law.....	20425	Federal reserve member banks:	
reports.....	9874, 15356, 18855	assets and liabilities—	
employment opportunities, mediator positions.....	12113	monthly report.....	3470
report, 1962.....	10161	summary report.....	3471
Federal National Mortgage Association:		bank service arrangements, regulation S.....	8260
audit report, 1962.....	7859	changes in State bank membership, weekly announcement.....	3508
financial statements, GAO examination.....	5002	condition, weekly statement, banks in leading cities.....	3534
leaders of housing and home industry, accomplishments, etc., industry salute (remarks).....	5760	demand deposits, currency, etc.....	3592
news.....	3602	deposits, reserves, and borrowings, semimonthly report.....	3599
program activities of Fannie Mae, fact sheet.....	8238	loans.....	3893
Federal news clip sheet.....	3663	maximum interest payable on time and savings deposits, regulation Q, supp.....	15507
Federal Office Space Committee, report.....	17186	measures of member bank reserves.....	15504
Federal Old-Age and Survivors Insurance Trust Funds, <i>see</i> Board of Trustees of Federal Old-Age and Survivors Insurance Trust Funds.		reserves and credit, weekly averages.....	3636
Federal personnel manual, <i>see</i> Civil service.		reserves and related items.....	2276
Federal Power Commission:		State member banks, list.....	4927
administrative process, suggested improvements, hearings.....	13661	supplements.....	4206
annual report, 1962—		Federal reserve par list.....	3673, 20678
departmental edition.....	2264	Federal Reserve statistical release (series).....	19203
document edition.....	2030	Federal reserve system:	
appropriations, 1964, hearings.....	18919	foreign exchange operations.....	8621, 19209, 10179
daily news digest.....	3964	open market operations, 1962.....	19209
Federal power act, Mar. 1, 1963.....	8239	State banking institutions, membership, regulations.....	15506
practice and procedure rules.....	4903, 13923	Federal Reserve System Board of Governors:	
publication list.....	8240	chores and choices (remarks).....	526
R series.....	19192	interpretations.....	12121
reports, opinions, decisions and orders, monthly.....	3665	publications, lists.....	2270, 17436
S series.....	506, 2265, 4902, 8241, 13915, 19193	regulation series.....	4926, 19208, 8259-60, 15506-507, 17438, 8256
Federal Prison Industries, Inc.:		report, 1962.....	8256
annual report, 1962.....	12975	research library, recent acquisitions.....	4146
audit report, 1962.....	7856	statement for the press.....	4053
GAO review.....	5000	statistical releases, guide to retention.....	528
Federal probation (periodical).....	3666	Federal retirement systems, <i>see</i> Civil service pensions—Retirement.	
Federal procurement regulations, FPR circulars.....	3667	Federal role in air pollution.....	3281
Federal property, <i>see</i> Public property.		Federal Safety Council, recommended safety standards digest.....	17439
Federal property and administrative service act, <i>see</i> Public property.		Federal savings and loan associations:	
Federal Radiation Council:		combined financial statements, 1962—	
position on current fallout levels.....	6409	advance highlights.....	15484
report.....	13924, 3668	assets and liabilities.....	20664
Federal register.....	6152, 9965		
act, amend, reports.....	15502		
code of Federal regulations.....	3669		
codification guide.....	3670		
index.....			

# INDEX 1963

Entry	Entry
Federal savings and loan associations—Continued	Federation of Malaya, <i>see</i> Malaya.
conventional loans made in excess of 80 percent of property appraisal	Federation of Malaysia, <i>see</i> Malaysia.
loans to finance land acquisition and development	Federation of Rhodesia and Nyasaland:
operations, 1962, report	economy, basic data
recent and proposed regulations (remarks)	exports and imports, licensing and exchange controls
rules and regulations, insert sheets	import tariff system
12104-107, 19174, 20668	preparing shipments to
test appraisals (address)	sending gift packages to
<i>see also</i> Savings and loan associations.	
Federal Savings and Loan Insurance Corporation:	Fedor, Joseph V.:
audit report, 1962	analytical theory of stretch yo-yo for de-spin of satellites
deposits and share accounts, increase maximum coverage for each depositor, hearings	solar radiation pressure effect on spin of Explorer XII
establish Federal Deposit and Savings Insurance Board to manage FSLIC, hearings	
GAO audit	Feed, <i>see</i> Food for livestock—Food for poultry—Pellets.
now let's look at record (address)	Feed grains, <i>see</i> Grain.
operations, 1962, report	Feed water, <i>see</i> Boilers.
savings and loan associations, insured savings and mortgage activity, selected balance sheet items	Feedback, <i>see</i> Learning.
	Feeder cattle pooling
Federal service, <i>see</i> Civil service.	Feeder pig pooling, improved marketing through grading and commingling
Federal specifications, <i>see</i> Government supplies.	Feeders, feedlot equipment for beef cattle
Federal standards	
2281, 4931, 6444-46, 12125-129, 13940-942, 15510-512, 17441-442, 19211-218	Fees:
Federal statistical directory, 1963	attorneys in bankruptcy proceedings, court to examine—
Federal supply catalogs	law
cataloging manual, format and content	reports
NASA system, indoctrination charts	foreign countries for visa of U.S. passports
Federal supply classification handbook, alphabetic index	grand and petit jurors, increase, report
Federal supply code, <i>see</i> Government supplies.	land-grant colleges and States universities, 1962-63
Federal Supply Service, unnecessary depot handling and transportation costs of supply items, GAO report	visa, agreement with United Arab Republic
Federal tax policy, <i>see</i> Taxation.	witnesses in habeas corpus cases and forma pauperis proceedings, payment by U.S. marshal, report
Federal test method standards	<i>see also</i> Talent fees.
2282, 8263, 13943, 20682	Fehlberg, Erwin, error propagation of interpolation formulas for 2d-order differential equations
Federal textbooks on citizenship	
8360-65, 14043-45, 15628-630, 17542-543, 19343.	Feigenbaum, Irwin:
Federal Trade Commission:	occupational wage survey—
act, amend—	Trenton, N.J.
hearings	York, Pa.
report	
advisory opinion on joint ads, hearing	Feller, Charles E., effect of oscillations on heat transfer
appropriations, 1964, hearings	Fein, M. L., determining glutaraldehyde, etc., in tanning solution
decisions (bound volume)	
decisions (separates)	Feltier, Stanley A., mineral industry of New Hampshire
news release	Feldesman, William, address, Oct. 18, 1963
news summary	Feldman, Lloyd, young workers, their special training needs
opinion on joint ads, report	Feldspar, minerals yearbook chapter
report, 1962—	
departmental edition	Fellenz, Dietrich W., weight parameters influence on propulsion requirements of orbit-launched vehicles
document edition	
statutes and court decisions, supplements	Feller, Ralph P., human sympathoadrenal responsiveness in autumn, etc.
sundry nominations, hearings	
Federal wage-hour law, <i>see</i> Labor standards.	Fellowships:
Federal Water Pollution Control Administration, establish, hearings	foreign language fellowships, post-doctoral awards, 1964-65
	foreign languages, approved under national defense education act
	leadership preparation in education of mentally retarded children, graduate program

# JANUARY-DECEMBER

Entry	Entry
Fellowships—Continued	Fertilization of plants—Continued
national defense education act of 1958—	winter wheat in western Kansas, irrigation water management, consumptive use and nitrogen fertilization 16759
graduate fellows, addresses, schools, and fields of study, list -----	young slash pine in cultivated plantation ----- 10246
graduate programs—	Fertilizers:
1963-64 ----- 2165	attachment for tree-planting machine, progress report ----- 10
NDEA and higher education (periodical) ----- 3954	effect on growth of dogwood ----- 7472
National Science Foundation—	how much shall I use? gardener's guide ----- 13169
awards, 1963 ----- 9249	inorganic, response of hardwood seedlings ----- 7471
graduate program—	lawns and gardens, selecting ----- 9571
administrator's guide ----- 11127	manufacturing, industry wage survey ----- 14473
1962 ----- 7343	phosphorus and potassium, effects on yield and botanical and chemical composition of grass-legume mixtures ----- 16712
Public Health Service grants, 1962 funds ----- 21034	publications, price list, survey ----- 7393
Feltman Research Laboratories, technical report ----- 7378	situation, 1962-63 ----- 11445
Felton, Joseph M., large solid propellant boosters ----- 6203	trends, 1962, and scope of TVA's activities ----- 9464
Females, <i>see</i> Women.	<i>see also</i> names of substances.
Fence fabrics, steel galvanized chain link ----- 144	Fetal death, <i>see</i> Still-birth.
Fenlason, Audra S., selected publications of Bureau of Labor Standards ----- 5435	Feth, J. H., reconnaissance of head-water springs in Gila River drainage basin, Ariz. ----- 8347
Fenton, Richard H., 7-year results in managing small woodlot in southern Maryland ----- 20703	Fetner, Robert H., mitotic inhibition induced by exposure to ozone ----- 16799
Fernandez, Antonio Gutierrez, <i>see</i> Gutierrez Fernandez, Antonio.	Fetterman, David E., delta-wing hypersonic stability, etc. ----- 7262
Fernández, César, habituation of vestibular reflexes, effect of caloric stimulation in decorticated cats ----- 20312	Fetus, drug effects on foetus ----- 1923
Fernandez, Kenneth L.	Feustel, I. C., processing of frozen french fried potatoes and other frozen potato products ----- 14838
overseas business reports, licensing and exchange controls of Federation of Rhodesia and Nyasaland ----- 6596	Fever ticks, <i>see</i> Cattle ticks.
preparing shipments to Federation of Rhodesia and Nyasaland ----- 2394	FHA, <i>see</i> Farmers Home Administration—Federal Housing Administration.
Fernandez, Rafael I., relief ----- 11936	FHLBB, <i>see</i> Federal Home Loan Bank Board.
Fernley, Nev., ground-water conditions in area ----- 8351	Fiber boxes, <i>see</i> Boxes.
Ferns, Hawaiian tree, commercial uses and volume ----- 6503	Fiber stresses, <i>see</i> Strains and stresses.
Ferrell, Kenneth R., H-43B, category 2 performance tests ----- 14902	Fiberglass, <i>see</i> Glass fibers.
Ferrer, Olga M., relief ----- 8026, 9856	Fibers:
Ferrimagnetic materials, <i>see</i> Magnetic materials.	bonded fabrics, nonwoven textiles, current industrial reports ----- 15059
Ferris, Eleanor, shopper's guide to U.S. grades for food ----- 1697	carpet wool and related stocks, current industrial reports ----- 3575
Ferrites:	glass, physicochemical properties, USSR study ----- 10823
ferrite-loaded open transmission line ----- 18231	man-made, woven goods finished, current industrial reports ----- 18680
hysteresis loop of cobalt-nickel ferrites ----- 20314	vegetable, foreign agriculture circulars ----- 3720
Ferroalloys, minerals yearbook chapter ----- 19831	<i>see also</i> names of certain plants, textiles, etc.
Ferromagnetic materials, <i>see</i> Magnetic materials.	Fibrinolytics and their opposites, NHI supported research grants ----- 19961
Ferromanganese, electric furnace smelting of high-iron manganiferous materials for producing ferromanganese ----- 10958	Fibrous glass, <i>see</i> Glass.
Ferrosilicon, mineral industry survey, quarterly ----- 3684	Fichtel, C. E., September 26, 1960 solar cosmic ray event ----- 3157
Ferrous metallurgy, <i>see</i> Metallurgy.	Fiction, recent American fiction (lecture) ----- 16303
Ferrous metals:	Field, J. H., transient effects in fast reactor fuels, UO <sub>2</sub> irradiations ----- 14982
castings industry, outlook for 1963 and review of 1962 ----- 4528	Field, William, Banking and Currency Committee, Senate, 50th anniversary, 1913-63 ----- 9957
metallurgy, utilization of natural gas, USSR study ----- 2466	Field artillery, <i>see</i> Artillery.
Ferrous sulphate, crystalline hydrates, heats of formation ----- 16332	Field crops, <i>see</i> Crops.
Fertility, <i>see</i> Fecundity.	Field facility directory ----- 15474
Fertilization of plants:	Field manuals, <i>see</i> names of departments, etc., issuing manuals.
pollination of non-emasculated flowers, biological characteristics of hybrids, USSR study ----- 5176	Field of stones, study of art of Shen Chou (1427-1509) ----- 583
	Field reversals of paleomagnetic type in coupled disk dynamos ----- 11189

# INDEX 1963

Entry	Entry
Felder, William L., thermal decomposition of linear perfluoroalkanes-----	14552
Fields, J. Arthur, relief-----	13696, 15220, 17012
Flenup, Darrell F., economic effects of U.S. grades for lamb-----	6316
Fliering, Myron B., use of correlation to improve estimates of mean and variance-----	5023
Fife, William P., stomach and other estrathyroidal, extrarenal avenues of iodide loss during thyroid uptake tests-----	16789
Fighter planes:	
delta-wing interceptor, approach and landing investigation at lift-drag ratios of 3 to 4-----	10997
swept-wing-----	
director-type radar fire-control system and scope presentation, tracking performance-----	10971
lift and drag at transonic and supersonic speeds-----	10983
tailless model, low-aspect-ratio swept-back wing-stability and control, wind-tunnel investigation-----	14528
wing-control configuration, rolling effectiveness at Mach numbers from 0.6 to 1.5-----	14532
Figs:	
growing in South for home use-----	29
production, use, value, by States, 1961-62-----	16615
Fiji Islands:	
import tariff system-----	6613
plant quarantine import requirements-----	1652
Filamentary materials, strength of sheets with one or more broken fibers-----	9158
Filaments:	
filamentary structures-----	
axisymmetric, rotating, pressurized, analysis-----	11081
theory and applications-----	3163
Files and filing (documents):	
alphabetical, by D.C. Recorder of Deeds of liens on motor vehicles and trailers, eliminate-----	17019
law-----	13625, 13733
President's Committee on Equal Employment Opportunity classification and procedural manual-----	18271
Files and rasps:	
standard stock sizes, etc., recommendation of trade-----	4556
Swiss pattern files, standard stock sizes, standard of trade-----	18633
Filipinos in United States, social and economic statistics, census of population, 1960-----	18702
Filling machines, automatic pallet-box filler for apples-----	34
Fillo, P. V., manganese mining and milling methods and costs-----	5472
Film badges, see Photographic film detectors.	
Film cooling see Cooling.	
Film libraries, see Motion pictures.	
Film strips, see Filmstrips.	
Films (coatings):	
ferromagnetic, structural and magnetic properties-----	87
polymer films for saline water conversion, investigation-----	8369
see also Monomolecular films.	
Films (coverings):	
polychlorovinyl, employment for treatment of wounds and burns, USSR study-----	19506
Films (metallic), see Metallic films.	
Films (photography):	
heart research news, NIH film, information booklet-----	19963
see also Motion pictures.	
Filmstrips:	
aeronautics and space-----	
adult, list-----	19886
elementary grades, list-----	19884
secondary grades, list-----	19885
Agriculture Department, list-----	18414
neurological and sensory disease, film guide-----	16514
copyrighted-----	
Jan.-June 1961-----	2109
July-Dec. 1961-----	2110
July-Dec. 1962-----	13829
Library of Congress catalog-----	3865
medicine and allied sciences, film reference guide-----	14662
neurological and sensory disease, film guide-----	16514
Public Health Service film catalog-----	16518
safety, list-----	15508
Filters and filtration:	
molecular, preparation of marine phytoplankton for microscopic examination and enumeration-----	6467
Operation Plumbbob, blast effects on air-cleaning system-----	141
towed pump and shipboard filtering system for sampling small zooplankters, operational status-----	13975
see also Band-pass filters—Light filters.	
Finance:	
agricultural review-----	2122, 15411
agriculture, balance sheet, 1963-----	18421
aid for students in environmental science and engineering, listing-----	18284
assistance programs administered by Health, Education, and Welfare Dept-----	17537
Atomic Energy Commission, report, 1963-----	20331
balance sheet of production and distribution of products between departments, Communist China study-----	850
cash transactions of U.S. Gov't, regulations governing reports-----	14756
city finances-----	16887-888
city government, 1962-----	
compendium-----	16888
summary-----	16887
code of Federal regulations-----	6430
college and university, finance series-----	368, 13842, 13855, 13862
combined financial statements-----	
member savings and loan associations, 1962, advance highlights-----	15484
members of Federal Home Loan Bank System, 1962, assets and liabilities-----	20664
Communist China-----	
appropriations, better controls-----	14367
commercial-----	14100
translations-----	652, 913, 2577, 2621, 2641, 2837, 2886, 5375, 6740, 6869, 6937, 6984, 7092, 8455, 8532, 8599, 8844, 8984, 10439, 10529, 12699, 14182, 14241, 14367, 14378, 15754, 16015, 16090, 16189, 17685, 17754, 17903, 19374, 19462, 19488, 19666, 19702, 19738, 20799, 20877.
Cuban trade and payments agreement with Mail-----	2864



# JANUARY-DECEMBER

	Entry		Entry
Finance—Continued		Finance Continued	
current expenditures per pupil in large public school systems, 1959-60	2150	public school finance programs — Continued	
daily statement of Treasury	3581	South Dakota	15444
farmers cooperative, what are patronage refunds	8207	Utah	13860
financial policies and balance of payments (remarks)	13105	Vermont	15445
financing your social security benefits	5663	Washington State	10078
fiscal and monetary policy, proceedings of conference, sponsored by President's Advisory Committee of Labor-Management Policy	3257	West Virginia	17390
fiscal requirements of Federal executive agencies, joint committee to evaluate—		Wyoming	17387
hearings	8112	publications, price list	1395
report	8087	receipts and expenditures of U.S.—combined statement, 1962	1612
governmental, in United States, 1962	16901	monthly statement	3924
higher education, 1961-62, statistics, preliminary report	15437	residential—	
highway bond financing, analysis 1950-62	21097	homeowner properties, census, 1960	4574
industry—		homeowner properties of non-white families, census, 1960	13306
employer expenditures for supplementary remuneration practices, 1961	18044	rental and vacant properties, census, 1960	16881
financial and operating ratios	1471	scientific research and technology, USSR study	6770
international capital transactions of United States	2278	small manufacturing firms, equity financing	1476
labor organizations, reporting guide	5431	State and local government, State reports	16878
lest we forget great International financial crisis of 1931 (remarks)	19206	State finances, 1962	7767, 9730, 16904
local Government, 1960's, past trends and future prospects (paper)	7526	State government—	
long-term financing for small manufacturing firms, sources	1477	compendium, 1962	9730
manufacturing corporations, quarterly report	4125	reports, bibliography	5991
medical care, source book of data through 1961	5685	summary, 1962	7767
monetary policy and international payments (remarks)	2272	State payments to local governments	20342
Mongolian People's Republic, decisions of Council of Ministers and instructions of Minister of Finance	10699	statements of Federal National Mortgage Association, GAO examination	5002
National Guard, quarterly review of State financial plan, reporting procedures	19954	statistics, Federal reserve chart book	3672
public school finance programs—		treasury bulletin	4244
Alabama	19111	United Nations financial situation, 1962, semiannual report	19051
Alaska	6339	United States agricultural exports under Government programs	6319
Arizona	15441	United States Government central accounting system, regulations	14757
Arkansas	13857	see also Accounts and accounting—Budget of United States—Credit.	
California	6338	Finance Committee, Senate:	
Connecticut	12073	calendar	3853
Florida	13856	hearings	6293, 8102-4, 12015-16, 13801, 15383, 20607
Hawaii	19113	Investigation and studies, State taxation on interstate commerce activities, extend time for filing reports—	
Idaho	12074	law	13416
Illinois	15442	report	11987
Indiana	17388	reports	6276, 6280, 9974-76, 9988-89, 11947, 11956, 11987-988, 11991, 13718, 13742, 13744-746, 15346-351, 17239, 17245, 17286, 17292-293, 19017.
Iowa	12075	Finance companies, sales finance companies	4167
Kansas	12076	Finance decisions, see Interstate Commerce Commission.	
Kentucky	20641	Finance Division, Interior Dept., appropriation ledgers, 1853-1923, index	16416
Massachusetts	19112	Financial analysts, career opportunities, Housing and Home Finance Agency	16965
Mississippi	17386	Financial Institutions Committee, report	10028
Missouri	10077	Financial protection for Federal employees, sickness, accidents, unemployment	16946
Montana	19114	Financial statements, see Finance.	
Nevada	6340	Financial statistics, see Finance.	
New Mexico	17389	Finchum, R. N., school fires, prevention, control, protection	384
New York	12077		
Ohio	12078		
Oregon	13858		
Pennsylvania	13859		
South Carolina	15443		

# INDEX 1963

	Entry		Entry
Findlay, Robert:		Fir--Continued	
occupational wage survey--		grand fir, specific gravity and tree	
Newark and Jersey City, N.J.	12793	weight	17501
Philadelphia, Pa.-N.J.	10896	Fire ants, <i>see</i> Ants.	
Findlay, Ohio:		Fire control, <i>see</i> Fires--Forest fires.	
Maumee River basin flood control,		Fire control (gunnery):	
engineer report--		course, fire control radar technician	
departmental edition	19145	training, trainee's guide	1367
document edition	18809	equipment, Federal item identifica-	
Fine, Burton D., sampling studies		tion guides for supply catalog-	
downstream of hydrogen-ni-		ing, supplements	3660
trous oxide-diluent flames	1308	Fire control technician, 2, Navy train-	
Fine, M. M., prereduced iron ore pel-		ing course	14629
lets, new blast furnace raw ma-		Fire-cured tobacco, <i>see</i> Tobacco.	
terial	3104	Fire Department of D.C.:	
Fine art, <i>see</i> Art.		fireman (firefighter), examination	
Fine Arts Commission:		announcement	6025
appropriations, 1964--		mutual-aid agreements with adja-	
law	15158	cent communities, amend act,	
reports	7939, 11951	report	7976
publications, price list	18279	Fire extinguishers:	
Finger, Harold B., remarks, Jan. 23,		Army replacement program, ex-	
1963	4500	cessive costs, GAO review	8314
Fingerprints, waiver of fingerprinting		cartridge and stored pressure types,	
requirements for nonimmig-		packed with potassium bicar-	
grant visas, agreement	9423	bonate dry chemical, perform-	
Finland:		ance	16460
civil aviation, survey	5985	dry, chemical, vacuum pneumatic	
economic developments, 1962	8391	process for filling	18253
gas appliances, household and com-		Fire extinguishing agents:	
mercial, U.S. market	13263	multipurpose powders aspects,	
plant quarantine import require-		evaluation	11161
ments	5804	potassium bicarbonate dry chemical,	
preparing shipments to	5084	discharge characteristics	16460
Finley, Amanda H., higher education		Fire-fighting apparatus:	
aids for Indian young people	5045	Federal item identification guides	
Finley, Hugh O.:		for supply cataloging, supple-	
measurement of M/E positions for		ments	3654
mass spectrometer using rotat-		motorized, current industrial re-	
ing coil gaussmeter	11564	ports	3575
versatile 6-inch radius mass spec-		runway foaming-tanker vehicle	18238
trometer for isotopic analysis		Fire insurance:	
of solids, liquids, or gases	9682	act of D.C., amend relative to false	
statements--		law	13431
Finnaill, Tommy L., geology, ore de-		reports	6157, 13731
posits, etc., Deer Flat area,		District of Columbia rate regula-	
Utah	12223	tion laws, amend, hearings	17308
Finneran, Helen T., records of Bureau		Fire prevention, <i>see</i> Fires.	
of Agricultural and Industrial		Fire protection, <i>see</i> Fires.	
Chemistry	3170	Firearms:	
Finney, R. Gordon, Jr., claim	13494	Federal laws under (RS, guide for	
Fins (aircraft):		law enforcement officers	5051
finned-vehicle attitude control sys-		interstate traffic, internal revenue	
tem, analytical study	7266	regulations	2379
radiating effectiveness of one-dimen-		national firearms act, code of Fed-	
sional variable thermal prop-		eral regulations	6583
erty on heat transfer	19915	small arms ranges, Air Force Man-	
Trailblazer II 3-stage rocket vehicle		ual	9608
having various fin configura-		Firemen (firefighters):	
tions, static aerodynamic char-		District of Columbia Fire Dept.,	
acteristics at low subsonic		examination announcements	6025, 9747
Mach numbers and angles of		mutual-aid agreements, D.C. and ad-	
attack up to 28°	11062	acent communities, amend	
wing-tip fins on delta configuration,		act, report	7976
rolling motions	20996	premium pay in lieu of pay at saved	
Fins (cooling):		rates--	
heat-transfer characteristics of sev-		hearing	15326
eral radiator finned-tube con-		report	15264
figurations	1279	salary trends, 1924-61	1162
radiating fin profiles, USSR ar-		Firemen (stokers):	
ticles	5386	boilerman 3 & 2, Navy training	
Fir:		course	9266
Douglas--		Fireplaces and chimneys	16735
bolted joints, performance	15577	Fires:	
change of grade and volume	2315	damage to records, salvaging and	
natural regeneration using mod-		restoring	10272
ified clear-cutting systems in		effects of nuclear weapons	10147
oregon Cascades	20708	farms, emergency plan	14896
plywood, standard of trade,		Federal Fire Council recommended	
amds.	4511, 5958	practices series	10272
pressure-treated marine piles	5961	Federal fire experience, 1961	2336
toxicity of diesel oil to cones	17485		
white, and California red, root-			
ing cuttings, factors affecting	6498		

# JANUARY-DECEMBER

	Entry
<b>Fires—Continued</b>	
fire weather damage in California, 1961	6494
flame extinguishment by chemical and physical agents, literature research	11470
hazards of flight vehicle combustibles, review	5470
protection, new developments	8327
rural fire defense preparation for survival	4370
safety and fire protection bulletin, VA	9476, 20220
safety, nursing homes	13006
school, prevention, control, protection	384
see also Forest fires.	
Firms, see Business.	
Firm, see Snow.	
First aid:	
cardiopulmonary resuscitation, Coast Guard pamphlet	16960
for soldiers, field manual	9653
guide for USDA employees	18415
national first-aid and mine rescue contest, 1961	1203
First National Conference on Wheat Utilization Research, report of conference	14842
Fiscal accounting, see Accounts and accounting.	
Fiscal codes, see names of departments, etc., issuing codes.	
Fiscal policy, see Finance.	
Fischer-Tropsch synthesis:	
carbides, nitrides, and carbonitrides of iron as catalysts	19824
oil-circulation process, experiments with massive-iron catalyst	9124
Fish, George E., titanium resources of Nelson and Amherst Counties, Va., saprolite ores	1234
<b>Fish and fisheries:</b>	
acclimatization of fish, USSR translations	16133, 17805
Alabama landings	3449, 15517
Alaska, annual summary, 1961	543, 8264
Argentina's industry, 1961	2293
Biological Laboratory, Honolulu, progress in 1961-62	15518
Black Sea fish differentiating ability, USSR statistical analysis	17736
blue-sac disease of fish	13963
bottom fish survey off Oregon coast, Apr.-June 1961	19228
Brazil's industry, 1962	19237
California landings	3493
canned fish and byproducts, list of producers	3527
canned fishery products, annual summaries	4936, 8268
Chesapeake fisheries, annual summary, 1961	544
code of Federal regulations	4925
commercial dealers list	3527
commercial fisheries abstracts	3525
commercial fisheries outlook, general fishery situation, etc.	4955, 17452-455
commercial fisheries research and development act, 1963, report	13756
commercial fisheries research and development in Great Lakes and Central region	13953
commercial fisheries review	3526
separates	546-547, 4944-47, 8270-74, 13956-962, 13519-520, 17448-450, 19228-229
commercial fisheries, TL series	4948
common names of fish, USSR translation	10709
Communist China, ichthyology	15664

	Entry
<b>Fish and fisheries—Continued</b>	
conservation notes	2286, 4949, 6452-53
conservation notes	2286, 4949, 6452-53
current fishery statistics, CFS series	541-544, 2285, 3449, 3493, 3686-87, 3712, 3742, 3755, 3879, 3881, 3887-88, 3897, 3903-4, 3957, 3963, 3971, 3986, 4156, 4191, 4197, 4233, 4280, 4310, 4935-39, 6449-50, 8264-69, 10185-188, 12130-135, 13946-951, 15515-517, 17444-445, 19222-224, 20683-686
deep-sea fishes, USSR study	8792
deep-sea fishing and whaling, international regulations, new treaties, etc., USSR articles	7079
Denmark, fisheries, trends 1962-63	19233
Eastern Pacific marine game fishing, atlas	19227
fish and wildlife act of 1956, facilitate application and operation, hearings	299
fish consumption by food-stamp and related low-income families	13958
fish farming industry	4948
fish growth and composition of fishery complexes, effect of food organisms on, USSR study	8932
fish passage report—	
Bonneville, The Dalles and McNary Dams	396
Rock Island Dam, 1961	6464
fish press cake, hydraulic press for laboratory preparation	8274
fishery associations, U.S., list	549
fishery biological papers in nongovernment publications, 1940-56, index	19226
fishery bulletins	2287-88, 4952, 12137, 19230
title page, contents, and index—	
v. 57	2289
v. 58	2290
v. 59	2291
v. 60	4953
v. 61	4954
v. 62	15521
fishery industrial research	10190, 19231
fishery industries, world trade, aspects of interest	547
fishery leaflets	549-552, 4955-57, 6455, 8276, 10191-195, 13963-964, 15522-523, 17452-455, 19232
fishery products—	
imports and exports, 1958-62	13951
industrial, annual summaries	4937, 8269
manufactured, 1961, annual summary	4938
manufacturers list	3527
fishery resources and Fish and Wildlife Service	8285
fishery statistics of United States, 1961	15538
fishing and operations on aquatic products, fair labor standards act, provisions applicable	9486
fishing in U.S. territorial waters, prohibit by others than U.S. nationals, hearings	19047
fishing industry advancing international relations, USSR study	14127
fishing industry development, USSR problems	8509
fishing regions, most promising on basis of oceanological research, USSR study	14187
Florida, landings	3712, 12135, 15516
foreign fishing vessels, prohibit fishing within territorial waters of U.S., report	17295

# INDEX 1963

	Entry
Fish and fisheries—Continued	
foreign governmental protection against competition from imports, committee print.....	2088
fresh and frozen products, Chicago receipts, 1961.....	546
fresh fish, radiation and pasteurization process, research and development program (remarks).....	18610
frozen fish, monthly report.....	3742
preliminary.....	3743
frozen fishery products, annual summary, 1962.....	6449
Galveston Biological Laboratory, research, 1962.....	13955
Georgia landings.....	3755
Ghana, survey.....	19236
Great Lakes commercial fisheries, economic review, 1940-59.....	13952
Great Lakes fisheries, 1961, annual summary.....	13950
Greece, fisheries, 1962.....	19235
Gulf fisheries, annual summary, 1961.....	2285
Hawaii, annual summary.....	6450, 19224
Hungary, fishing.....	731, 2454, 2669, 5227, 6882, 8769, 8960, 10707, 12605, 14393, 15897, 17657, 19643, 20876.
industry, mechanization and automation, urgent task, USSR study.....	10472
ionizing radiation, effects on lipids of fish—	
annual report.....	18595
final summary.....	18598
legislation, hearings.....	12011
legislative actions affecting commercial fisheries, 87th Congress.....	553
line trawl fishery for cod and haddock, Chatham, Mass.....	17450
Louisiana landings.....	3879
Maine landings.....	3881, 13947-948
management of fisheries and dynamics of fish populations, USSR study.....	14113
market news leaflets.....	553-554, 2292-93, 10196, 15524-25, 19233-237.
marking fish and invertebrates.....	10195
Maryland landings.....	3887, 19222
Massachusetts landings.....	3888, 15515, 17444
Michigan landings.....	3697
Middle Atlantic States fisheries, annual summary, 1962.....	20685
minimize injurious effects of insecticides, etc., hearings.....	15324
Minnesota landings.....	3903
miscellaneous legislation, 1962, hearings.....	4757
Mississippi landings.....	3904, 20683
national fish hatcheries—	
list.....	10191
6 questions everybody asks.....	4943
Netherlands, 1961.....	10196
New Jersey landings.....	3957
annual summary, 1962.....	12131
New York landings.....	3963, 12130
Nigeria, survey.....	15525
North Carolina landings.....	3971, 13946
North Pacific high seas, fisheries, international convention, amendments.....	16607
northwest Atlantic, international convention of 1949, multilateral understanding.....	16602
Ohio landings.....	3986
olfaction in fish, USSR study.....	8858
Oregon landings.....	19223
annual summary, 1961.....	541
Pacific Coast States, annual summary, 1961.....	8265

	Entry
Fish and fisheries—Continued	
Pacific marine fisheries compact, amendment, hearings.....	4757
packaged products, 1962, annual summary.....	8267
papers on fishes, etc., National Museum bulletin, title page, etc.....	11114
Peru's fishing industry, major developments, 1960-62.....	554
pollution-caused fish kills, 1962.....	11244
pondfish hatchery for sport fishery resources, general information.....	12136
Portugal's industry, 1962.....	19234
progressive fish-culturist.....	4113
properdin content in fish, USSR study.....	17817
publications, price list.....	12978
radiation of fish, annual report, Oct. 1961-Sept. 1962.....	18595
report, Bureau of Commercial Fisheries Biological Laboratory, 1961.....	13954
research reports.....	2297-98, 17462
resources affected by John Day lock and dam project.....	8275
Rhode Island landings.....	4156, 10187
Rumanian Institute for Piscicultural Research and Planning, activities, translation.....	17908
sale of special permits for fishing in national forests, unauthorized diversion of revenues by Forest Service, GAO report.....	2335
Senegal fishery developments.....	15524
shrimp fisheries in Guatemala, El Salvador and Nicaragua, survey.....	2292
sounds, fish, significance, USSR study.....	8662
South Atlantic fisheries, annual summary, 1962.....	20686
South Carolina landings.....	4197, 13949
special fisheries marketing bulletins (series).....	13965-966
special scientific reports, fisheries series.....	557, 2299-2300, 4969-70, 6463-69, 8279-83, 10199-202, 13972-976, 19241-244, 20688.
sport fishery abstracts.....	4203
sport fishery research, progress 1962.....	10189
sport fishes, study genetics and carry out selective breeding, hearings.....	4757
State commercial fishery research and development, promote, hearings.....	12011
statistical digest.....	15538
stockfish, South Africa fisheries.....	8271
Texas landings.....	4233
transplanting activity of Central Production Acclimatization Station, USSR.....	20848
trout hatchery, description and purpose.....	4941
United States—	
advance report, 1962.....	4939
annual summary, 1961.....	10186
fishing industry and European Common Market.....	8273
preliminary review, 1962.....	10188
use of radioactive isotopes, USSR study.....	19411
USSR—	
fishery research, translations.....	15083
fishing industry, use of rapid-freezing methods.....	17755
hydrometeorological service in Barents Sea and Atlantic Ocean.....	795

# JANUARY-DECEMBER

	Entry		Entry
<b>Fish and fisheries—Continued</b>		<b>Fish meal:</b>	
USSR—Continued		factors that may influence demand.	13961
lake and river fishing, recent developments	12372	production—	
Pacific Ocean, fishing industry		annual summary, 1962	12133
plenums on research	10658	monthly reports	3686
research on increasing and using fish populations	17911	supply and price trends	8153
role of youth in creating an abundance of fish	16232	<b>Fish nets:</b>	
translations from—		monofilament and multifilament, comparison of salmon catches in gill nets	15320
Problems of ichthyology	10482	purse seine, distribution of fishing for Atlantic menhaden, 1955-59	8281
Rybnoye khozyaystvo	10800, 14174	<b>Fish oil:</b>	
	12652	production—	
	12722, 14209	annual summary, 1962	12133
underwater fishery research	8860	monthly reports	3686
Virginia landings	4280, 12132	<b>Fish Springs National Wildlife Refuge, birds</b>	4962
warm water fishes, bioassay and use of pituitary materials to spawn	2298	<b>Fish sticks:</b>	
Washington State landings	20684	and portions—	
annual summary, 1961	542	annual summary, 1962	8266
water resource development projects, planning policy, hearings	13653	report	3687
white spot disease of fish eggs and fry	6455	<b>Fish traps, fyke trapping as means of indexing salmon escapements in turbid streams</b>	6466
Wisconsin landings	4310, 12134	<b>Fisher, David, von Zeipel and modified Hansen methods as applied to artificial satellites</b>	21005
<i>see also</i> Diseases of fish—Fishing—Marine fauna— <i>also</i> headings beginning Fish— <i>also</i> names or classes of fish		<b>Fisher, Frank L.:</b>	
<b>Fish and Wildlife Service:</b>		ferroalloys	19831
circulars	545	silicon	18105
4941-43, 6451, 10189, 12136, 13952-955, 15518, 17446-447, 19225-227		<b>Fisher, Frank R., radiation research, proceedings of international conference</b>	14613
consultation with before pesticide use, hearings	15324	<b>Fisher, Glenn, soil survey report, Carbon County, Pa.</b>	1505
fishery biological papers by Service authors in nongovernment publications, 1940-56, index	19226	<b>Fisher, H. H., survey of apple clones in United States</b>	11433
fishery bulletin, title page and index—		<b>Fisher, K. H., dietary conditioning for nutrient restriction</b>	1753
v. 60	4953	<b>Fisher, Lewis R., blunt bodies at transonic speeds, aerodynamic characteristics</b>	10986
v. 61	4954	<b>Fisher-Galati, Stephen A., Rumania, bibliographic guide</b>	19812
fishery resources	8285	<b>Fisheries, <i>see</i> Fish and fisheries.</b>	
migratory bird population, wildlife management, hearings	15325	<b>Fisheries Council, Indo-Pacific, <i>see</i> Indo-Pacific Fisheries Council.</b>	
pesticide-wildlife studies, review of investigations, 1961-62	17447	<b>Fishermen:</b>	
publications printed and duplicated, monthly list	3915	fishing boat owners medical care, restore eligibility—	
refuge leaflets	555	hearings	12011
2294-95, 4958-68, 6456-62, 8278, 10197-198, 12138, 13967-971, 15526-534, 17456-460, 19238-240		report	11964
regulatory announcements	15535	marketing act, hearings	19046
	17461	<b>New England fishing vessel owners safety manual</b>	4942
releases	4055	<b>Fishermen's and fish shore workers' unions:</b>	
reports, 1962	15514	collective bargaining, voice in ex-vessel sale of fish, hearings	4773, 19046
special scientific reports—		United States, list	550
fisheries series	557	<b>Fishery industrial research</b>	10190
2299-2300, 4969-70, 6463-69, 8279-83, 10199-202, 13972-976, 19241-244, 20688		<b>Fishery Management Services Branch, annual report, 1962</b>	19221
wildlife series	558-559	<b>Fishery products, <i>see</i> Fish and fisheries.</b>	
4971-72, 6470, 13977, 15536-537		<b>Fishing, <i>see</i> Fish and fisheries.</b>	
special scientific reports and special scientific report—fisheries, list	8276	<b>Fishing economy (USSR periodical):</b>	
Technology Branch publications, bibliography	15523	translations	9006
work, research and management for food and recreation	4950	<b>Fishing gear, hard crab, types used in Chesapeake Bay</b>	4945
<b>Fish bait, <i>see</i> Bait.</b>		<i>see also</i> Trawls and trawling.	
<b>Fish culture, <i>see</i> Fish and fisheries.</b>		<b>Fishing vessels:</b>	
<b>Fish farming industry</b>	4948	construction assistance, extend, correct inequities in program, etc.—	
<b>Fish hatcheries, <i>see</i> Fish and fisheries—<i>also</i> names of hatcheries, or places where located.</b>		hearings	20501
<b>Fish Lake Drainage and Levee District:</b>		report	17279
engineer report—		<b>construction assistance program, hearing</b>	13796
departmental edition	451	<b>foreign, prohibit fishing within territorial waters of U.S., report</b>	17295
document edition	259		



# INDEX 1963

Entry	Entry
Fishing vessels—Continued	Flammability, <i>see</i> Inflammable materials.
New England, safety manual for fishermen, captains, and owners	Flanders, Russell B., employment outlook and changing occupational structure in electronics manufacturing
purse seine, distribution of fishing for Atlantic menhaden, 1953-59	Flaps (aircraft):
Fishmeal, <i>see</i> Fish meal.	blowing boundary-layer control
Fission, spontaneous and synthesis of far-transuranium elements, USSR study	trailing- and leading-edge flap, ground effect tests of 35° sweptback wing jet transport--
Fission products:	trailing edge, control-aspect-ratio effects
concentrations in milk, rapid methods for estimating	Flares, pocket pen, evaluation
metabolism, research on physicochemical state and metabolic path of radioecium solutions, monitoring in atmosphere, intercalibration of systems employed	Flashlight cases, current industrial reports
radioactivity in air along 80th meridian (west), 1961	Flathead Indians, Confederated Salish and Kootenai Tribes of Flathead Reservation, set aside lands for, report
Fitting coats and suits	Flathead River and Valley, Knowles Dam project, hearings
Fittings (auxiliary parts):	Flatware, stainless-steel, Tariff Commission, report
Federal item identification guides for supply cataloging, supplements	Flavors, fruit-flavor concentrates, production, code of Federal regulations
Fitzhugh, H. Naylor, problems and opportunities confronting Negroes in field of business	Flaxseed, straw, potential for extending utilization
Fitzpatrick, John, biaxial device for determining modulus of elasticity of stress-relief cores	Fleas:
Fitzpatrick, R., materials for laser applications	ecology problems, use of radioactive isotopes, USSR study
Fitzsimmons, Robert J., hospital outpatient services, references	how to control
Fitzsimons General Hospital, Medical Research and Nutrition Laboratory, reports	Fleet Ballistic Missile program, Polaris management
7683-87, 11547-549, 132-246	Fleet Marine Force manual FMFM series
Fixed capital, amortization and capital repairs in ferrous metal-lurgy, USSR	1193, 3045, 20940
Fizika metallov i metallovedeniye (periodical):	Fleet Marine Force Medical Department support
translations	7187
Fizika tverdogo tela (periodical):	Fleming, Roscoe, sickening story of water pollution
translations	11246
Fiziologicheskyy zhurnal (periodical):	Fleming, W. A., turbojet performance and operation at high altitudes with hydrogen and Jp-4 fuels
translations	1260
10556	Fleming, Walter E., Japanese beetle in United States
Flags:	9562
American, 5-cent postage stamp (poster)	Flessas, Demetrios, and wife, relief
our flag, story, etc., print as House document, reports	20555
pledge of allegiance, print additional copies, report	Fletcher, E. Royce, nuclear bomb effects computer, including slide-rule design and curve fits for weapons effects
United States	5929
design and dimensions, clarify law and procedure, report	Flexibility in undergraduate curriculum
how to display and respect surrounding Washington Monument, ceremonies in connection with raising and lowering	6336
hearings	Flies:
report	drosophila, controlling on tomatoes
Flameproofing, household fabrics	grown for canning
5825	25
Flames:	face fly populations on cattle, estimating
Bunsen, turbulent, structure and propagation	1625
extinguishment, literature research	horn flies on cattle, how to control house
hydrogen, nitrous oxide, diluent, sampling measurements downstream	14862
inhibition, hydrazine-nitrogen tetroxide reaction	and other synanthropic species, ability to cross water barriers, use of radioactive tracers in studying, USSR study
1308	1124
11475	how to control
Flaming Gorge Dam:	5824
waters impounded—	larvae, compounds affecting development, studies
designate as Lake O'Mahoney, report	16711
designate as Lake O'Mahoney and Lake Ashley, report	14886
20487	11454
	Simuliidae, annotated list of genus group names
	9592
	Flight:
	aerospace safety (periodical)
	3422
	America's manned space flight program, general information
	12844
	analog study of coupled motions of boost-guide type of hypersonic glider configuration at supersonic speeds
	18132
	assistance service, ATS manual, changes
	13227, 14924

# JANUARY-DECEMBER

	Entry
Flight—Continued	
cosmic—	
medico-biological control, USSR study	739
Vostok-5 and Vostok-6, USSR study	10440
deflected slipstream V/STOL aircraft, performance characteristics	14575
Delta 9 launch vehicle, vibration data	20978
equatorial balloon, agreement with India	3352
evaluation of lunar landing trajectories, VTOL test vehicle	5601
facts of flight, private aircraft operation	15472
foods, tubed, suitability	4394
free—	
investigation of deployment, dynamic stability and control characteristics of 1/12-scale dynamic radio-controlled large booster and parawing	18151
measurements of drag and static stability for blunt-nosed 10° half angle cone at Mach no. 15, paragliders, manned, unpowered, preliminary evaluation	9188
tests of 45° swept wings of aspect ratio 3.15 and taper ratio 0.54 to measure wing damping, etc.	16357
helicopters, H 21C, HU-1A, and H-34C equipped with XM-153 armament kit, evaluation	1741
in-flight gains realized by modifying twin side-inlet induction system	10978
in-flight shock-wave pressure measurements above and below bomber airplane at Mach nos. 1.42 to 1.69	20990
information manuals	91, 7650
amendments	1782, 5900
9042, 13229, 16810, 18526, 20316	9643
international	4427, 14927, 18527
amendments	483
Pacific supplement	
information publications—	
dates of latest prints	3586
enroute—	
Alaska	3688
Caribbean and South America	3689
enroute high altitude—	
Europe and north Africa	3690
Northeastern and Southeastern U.S.	3691
Northwestern and Southwestern U.S.	3692
enroute intermediate altitude, U.S.	3693
enroute low altitude, Europe and North Africa	3694
enroute Pacific and southeast Asia	3695
planning—	
basic regulations	3706
foreword	4398
international rules and procedures	3705
quarterly check list	3707
planning, air traffic control procedures—	
Alaska	3701
Canada and North Atlantic	3702
Europe and North Africa	3703
Pacific and southeast Asia	3708
United States	3704
planning data—	
Alaska	3696
Canada and North Atlantic	3697
Pacific and southeast Asia	3698
United States	3700

	Entry
Flight—Continued	
planning data—Continued	
terminal high altitude, Pacific and southeast Asia	3708
terminal low altitude—	
Africa and southwest Asia	3709
Pacific and southeast Asia	3710
inspection manual, U.S. standard	12142
instructors—	
certification, Federal aviation regulations, amdts	10112-113
Federal aviation regulations, amendment	478
international rules and procedures	3705
MATS flyer (periodical)	3889
natural pilot model for proficiency evaluation	18225-226
operating problems and aerodynamic and performance characteristics of fixed-wing, tilt-duct VTOL research aircraft	14557
path of, information about navigation of private aircraft	15476
realm of flight, weather in relation to piloting	17420
scaled-speed elastic swept-wing bomber and fighter models coupled wing tip to wing tip, investigation	5532
Scout launch vehicle in-flight aerodynamic noise measurements	14561
shock and vibration data of Echo A-12 application vertical tests	19923
AVT-1 and AVT-2	4413
stress responses of pilots	
supersonic airplane with low-aspect-ratio unswept wing and teatall, stability and control derivatives	14539
tandem-rotor configurations, power measurements	19931
test data display techniques, feasibility study	14905
test guides—	
commercial pilot, single-engine airplane	2302
multiengine airplane, class or type rating	17465
private pilot, single-engine airplane	12141
tests—	
bibliography of AFMTC technical publications, etc., 1952-62	5863
spinning vehicle for pitch control	14576
twin-duct induction system for Mach number range of 0.78 to 2.07	11001
trainers, operational engine simulation methods, study	18227
training, air navigation, Air Force manuals	4381-82, 5805
transition and hovering characteristics of tilt-duct VTOL research aircraft	1291
vehicles, composite construction, design procedures, military handbook	19080
winter flying glove, experimental design	11505
X-15 control system, operational experiences and characteristics	3128
YUH-1D helicopter, adverse weather tests	16767
see also Aircraft	
Flight charts, see Maps and charts.	
Flight crews:	
aircraft maintenance crews, weather factor effects in Arctic areas	18482
performance, rough-air effect, simulated low-altitude high-speed surveillance mission	16398
weather for air crews, Air Force manual	52

Do not order from index; see indicated entry

Page 263

# INDEX 1963

	Entry
Flight Safety Foundation, Inc., Aviation Crash Injury Research, final report, Sept. 16, 1961-Dec. 15, 1962	20204
Flight simulators: acceptable representation of airplane dynamic responses in pilot training	7367
jet-transport simulators for investigation of landing-contact conditions	1293
moving cockpit, study of piloted entries into earth's atmosphere for capsule-type vehicle at parabolic velocity	11068
piloted, supersonic transports in high-speed cruising flight handling-qualities requirements	11075
SAM 2-man cabin, psychiatric aspects	18500
study of lateral-directional handling qualities of STOL transport airplane	11053
study of pilot's ability to control failures of stability augmentation system on high performance aircraft	1312
trainers, operational engine simulation methods, evaluation studies	19998-20000
UDOFIT mathematical procedures	7366
Flight Standards Service: aircraft accident notification procedures, etc.	10102
releases	3711
Flight Test Pilot School, Experimental, USAF, see USAF Experimental Flight Test Pilot School.	
Flink, Salomon J., equity financing of small manufacturing firms	1476
Flint, Oliver S., Jr., Neotropical caddis flies, Rhyacophilidae and Glossosomatidae (Trichoptera) studies	9235
Flint, Mich., Bishop Airport, weather observations, hourly, summary, decennial census	21163
Flint River: flood control, etc.—engineer report—departmental edition—document edition—hearings	4855 4685 13667
FLIP, see Flight.	
Flip flops, fluid flip flops and counter.	16472
Flittner, Glenn A., review of 1962 seasonal movement of albacore tuna off Pacific Coast of United States	17449
Float dust deposits in return airways in American coal mines	7208
Flood control, see names of certain rivers.	
Floods: Ching Chiang disposition project, Communist China	5316
Cimarron River channel widening and flood-plain construction in southwestern Kansas	19310
Columbia River, flood season flow near The Dallas	4212
control, 1963, public works on rivers and harbors, hearings	13667, 15330, 17183
far western States, Dec. 1955-Jan. 1956	6568
description	15618
floods of 1957 (series)	8352
hydrology (series)	2355
occurrence in humid region of diverse terrain, factors influencing	2355

	Entry
Floods—Continued prevention, wildland management, model for evaluating—rivers and harbors control, 1962, hearings	6502 301
stages of surface streams, ground-water movements and bank storage	19322
Texas and adjacent States, Apr.-June 1957	8352
watershed protection and flood prevention act, amend to increase capacity of flood-detention structures, hearing—see also names of rivers, etc.	12005
Floors and flooring, laminated hardwood block flooring, standard of trade	7730
Flora, see Plants.	
Florence, Oreg., ground water in coastal dune area	5031
Florida: annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics—avocado marketing, economic aspects—central and southern project—Boggy Creek, engineer report—departmental edition—document edition—Cutler Drain area, engineer report—departmental edition—document edition—Hendry County, engineer report—departmental edition—document edition—South Dade County, engineer report—departmental edition—document edition	4568 14869 399 320 407 318
Chicora quadrangle, economic geology	2184 2072
climate	3399
climatological data	3517
construction industries	1451
county business patterns, activities covered by OASDI program	15052
early potatoes, prepackaging at production points	4358
eastern, coastal warning facilities chart	3400
emergency loans to—nurserymen—vegetable growers	6384 6385
5B redevelopment area, statistical profile	11692, 15127
Four River Basins area, flood control, etc., engineer report—departmental edition—document edition	4856 4689
grapefruit, October test shipment from Tampa to Hamburg, Germany	9533
landings, fishery products	3712, 12135, 15516
marketing vegetables, 1962 summary	18385
mineral industry, minerals year-book chapter	1212
phosphate deposits, geology—phosphate slimes, chemical and physical beneficiation	8329, 20730 5490
pine plantations, tip moth damage	17497
population, 1960, characteristics	15041
precipitation data, hourly	3771
public school finance program, 1961-62	13856
sandstones and shales of Paleozoic age, petrography	15613

# JANUARY-DECEMBER

	Entry
Florida—Continued	
south range, effect of burning.....	10244
sweet orange seedlings decline, associated with Thielaviopsis basicola.....	20270
Tertiary echinoids from Caloosahatchee and Tamiami formations.....	16560
ZIP code directory.....	20033
Florida Keys, woods and flora, caparaceae.....	21041
Florists, wholesale facilities for Boston.....	35
Flotation:	
alkyl-dithiocarbamic acid amine salts as collectors for sulfide lead silme.....	1232
anionic, silica from goethitic iron-bearing materials, Cuyuna Range, Minn.....	9128
barite-fluorspar ore.....	10948
hematite ores, northeast Birmingham, Ala.....	3081
ilmenite, from Virginia saprolite and unweathered diorite ores.....	5498
iron ores at Ta-Ku Shan plant, Communist China study.....	8990
kyanite-quartzite rock, Graves Mt., Ga.....	16338
limestone, effect of ions common to natural water.....	9121
manganese ores stockpiled at Deming, N. Mex., and Wenden, Ariz., studies.....	1242
selective, barite-fluorspar ores from Kentucky.....	9120
siegenite in complex sulfide table middling from southeast Missouri.....	5475
Flounders, Pacific, application of radiation-pasteurization processes, annual report.....	18595
Flour:	
U.S. exports under Government programs, 1961-62.....	4977
wheat, American surplus commodities, sales to Soviet Union and Eastern Europe.....	18812
Flour mills:	
products, current industrial reports.....	3574, 5994
products, industry wage survey—departmental edition.....	1168
document edition.....	273
Flow:	
about flat-top wing-body configurations, solutions.....	5510
air—	
blast loading on airfoil in Mach number 0.7 airflow, experimental investigation.....	7263
pressure distributions on blunt cylinders at hypersonic speeds, properties in equilibrium and frozen flows in hypervelocity nozzles, charts, errata.....	20991
secondary, effects on annular base force of supersonic airplane.....	3117
angles, measurements in vicinity of 2 lifting configurations at Mach no. 2.01.....	5515
annular, without liquid entrainment.....	11035
axial, hub-tip radius ratio rotor designed for 40 pounds per second per square foot with design tip diffusion factor of 0.20, investigation.....	18572
B-52 flow field, aerodynamic characteristics of X-15 airplane in.....	5559
5539	

	Entry
Flow—Continued	
choking 2-phase flow literature summary and idealized design solutions for hydrogen, nitrogen, oxygen, and refrigerants 12 and 11.....	18191
clinging, ventilated phenomenon, investigation.....	20206
controlled, for ground effect machines.....	5758
criteria for extending streamflow records by correlation.....	5023
effects of fine sediment on flow phenomena.....	10295
ejector pumping characteristics for hot and cold primary flow.....	5514
equation for exponential and linear diffusivity functions, power series solutions.....	1629
facilities available for investigation at Institute for Applied Aerodynamics of Technical University, Dresden, East Germany.....	16012
flood-control tunnel 10, Fort Randall Dam.....	14886
fluid, hydrogen properties, formulation and digital coding.....	12854
forced convection, prediction of critical heat flux.....	14976
fuel, simplified theory of dynamic relation of ramjet pressures.....	7231
gas, effect on heat release of burning liquid drops in rocket combustor.....	9153
ground water, dispersion through heterogeneous materials.....	10288
high-enthalpy short-duration hypersonic gas, expansion tube for producing.....	5614
hypersonic, parameters for helium as real gas.....	9164
laminar—	
coaxial streams of greatly different densities, numerical solutions of problem of mixing.....	7251
incompressible fluids, heat transfer.....	5577
low-density plasma, direct velocity measurements.....	11060
mixed, past blunt bodies at transonic speeds.....	5561
nonequilibrium, over pointed bodies, application of Dorodnitsyn's integral method.....	16406
nonuniform, effects on performance of electrothermal thrusters.....	12866
oscillations, effect on heat transfer.....	5615
parallel, vibration of fuel rods.....	9676
propagation of plane acoustic waves in radiating gas.....	12889
real-gas hypersonic-nozzle, parameters for nitrogen in thermodynamic equilibrium.....	20997
separated and reattached, heat transfer in regions.....	10980
similarity solutions for small cross flows in laminar compressible boundary layers, errata.....	11088
sinusoidally perturbed, liquid in line, effect of closed-end side branch.....	18148
springs in southwestern Wisconsin.....	6508
steady, through nonhomogeneous aquifers, calculation of resistance and error in electric analog.....	5032
steam-water, effect of heat addition in empirical correlation of void fractions.....	1282
structure within constant pressure compressible turbulent jet mixing region.....	11076

# INDEX 1963

	Entry		Entry
Flow—Continued		Flukes, index, catalogue, Trematoda	
studies of flow in alluvial channels		and trematode diseases.....	16716
(series).....	10295	Flumes, critical depth, measuring run-	
subsonic, finite wings, integral		off from semilarid rangelands,	
equation relating general time-		field performance.....	9541
dependent lift and downward		Fluorescence:	
distributions.....	3141	anthracene compounds, mechanism	
supersonic, external, overexpanded		of effect of aromatic amines on	
performance of conical nozzles		fluorescence and photochemical	
with and without.....	5558	oxidation.....	10778
three-dimensional to wells and its		antibodies—	
application to unconfined aquif-		influenza and rickettsial diseases,	
fers, electric analog.....	2353	research USSR articles.....	15845
turbulent—		use of microbiological research,	
mass transfer in liquid streams....	11561	USSR study.....	16252
mass transfer through orifice of		bacterioscopic diagnosis of tuber-	
chamber.....	10457	culosis, USSR study.....	12520
wall pressure fluctuations in		detection of group A streptococci in	
cylindrical pipe, measurements		throat cultures by immunofluo-	
of longitudinal space-time		rescence.....	12987
correlations.....	11263	paraagglutinating E. coli strains	
two-phase—		ability to stain by fluorescent	
annular of various types, analy-		sera of different specificity,	
sis.....	18572	USSR study.....	12370
in vertical tube with heat addi-		processing bacteriological prepara-	
tion, visual study.....	5586	tions with fluorescent anti-	
venturi, effects of air content and		bodies, USSR study.....	12494
water purity on liquid tension		specific brightness of bacteria	
at incipient cavitation.....	9146	stained with fluorescent anti-	
vibrational-nonequilibrium, of ni-		bodies, criteria, USSR study....	17689
trogen in hypersonic nozzles....	12880	ultraviolet, of muscles, USSR	
viscous, over flat plate, asymptotic		study.....	12377
expansions for singular pertur-		use in microbiological studies, USSR	
bation problems.....	14572	studies.....	15862
visualization—		using fluorescent antibodies for ac-	
compressible fluids.....	14637	celerated diagnosis of typhoid	
techniques in helium.....	9183	fever and paratyphoids, USSR	
Flow of water, <i>see</i> Hydraulics.		study.....	12492
Flower induction and stimulation in		Fluorescent antibodies and microbiol-	
western white pine.....	13989	ogy (survey), USSR.....	14095
Flowers:		Fluorescent lamps, <i>see</i> Electric lamps.	
growing flowering annuals.....	16741	fluorides:	
transcontinental cut-flower ship-		drinking waters index.....	7314
ments, transit times and tem-		stannous, prophylaxis paste and	
perature.....	5833	topical solution in vitro per-	
Flue-cured tobacco, <i>see</i> Tobacco.		formance, alone and in com-	
Flue dust:		bination.....	4416
alkali content of fly ash, effective-		<i>see also</i> names of fluorides.	
ness in preventing expansion of		Fluorimetry, beryllium determination	
concrete.....	13890	in urine by ion exchange separa-	
frost heave characteristics of slag-		tion and fluorimetric meas-	
fly ash-lime base-course mix-		urement.....	14984
ture.....	12086	Fluorination, new partially fluori-	
Fluffed maple products, new use for		nated compounds.....	11158
maple sirup.....	1640	Fluorine:	
Fluhr, F. R., symmetry pattern rec-		analyses.....	20970
ognition system 2.....	18228	compounds—	
Fluid amplifier handbook.....	9312-13	partially fluorinated.....	11158
Fluidization, organic coating using		platinum-tube method for ox-	
fluidized bed technique.....	20014	ygen determination.....	18706
Fluidized bed reactors:		environment, influence on mechan-	
gypsum, decomposition.....	19859	ical properties of sheet alloys....	9176
sulfatization of manganiferous car-		injection processes for 15-percent	
bonate slates.....	16330	fluorine-85-percent oxygen and	
Fluids:		heptane in 200-pound-thrust	
fluid amplifications—		rocket engine.....	5524
basic principles.....	11197	liquid-fluorine system components,	
flow visualization, compressible		experimental evaluation.....	12864
fluids.....	14637	Fluorite, infrared studies of oleic acid	
fluid flip flops and counter.....	16472	adsorption.....	9130
hydraulic—		Fluormicas, lead and barium di-	
all-weather brake fluid develop-		silicic.....	10961
ment, 1st interim report.....	18264	Fluormicas, water-swelling synthetic,	
brake, corrosion inhibitor.....	21064	synthesis and description.....	19856
effects in spontaneous heating of		Fluoromimoronoids, water-swelling	
coal.....	10954	synthetic, synthesis and	
incompressible, heat transfer in		description.....	19856
laminar flows.....	5577	Fluorocarbons, perfluorocarbon poly-	
multibase mixtures, application of		mers, frictional properties....	14633
Burnett method of compres-		Fluorochrome, purification of fluores-	
sibility determinations.....	14524	cent conjugates by using ion	
organic, radiation stability, pro-		exchange resins, USSR study....	15798
gress report.....	4493	Fluoroesters, antioxidant action of	
resonant, nonlinear, nonplanar, free		metals and organometal com-	
surface oscillations in tank....	11073	pounds.....	7370



Entry	Entry
Fluorspar:	Foetus, <i>see</i> Fetus.
floatation concentration of complex	Foft, John W., chromosomes from human and animal peripheral blood leukocytes----- 20310
barite-fluorspar ore----- 10948	Fog:
mineral industry survey, quarterly- 3714	forecasting by atmospheric electricity measurements----- 11175
minerals yearbook chapter----- 19832	northwestern Greenland, size, distribution and water content--- 4841
production, 1962----- 18071	Fog signals:
selective floatation of barite-fluorspar ores from Kentucky----- 9120	barges in special vessel anchorage areas, amend rules-----
Fluosilicates, process for treating beryl-spodumene concentrates containing 10 to 30 percent beryl----- 5480	bearing----- 13798
Flushing Bay:	law----- 17014
and creek, commercial navigation improvements, engineer report-----	reports----- 11829, 11965
departmental edition----- 408	Hydrographic Office, lists----- 1364, 3208-9, 19990
document edition----- 263	Naval Oceanographic Office, list----- 5651, 7353, 9258-59, 11140, 21052
Flutter (aircraft):	Fohrman, Melvin J., static aerodynamic characteristics of short blunt 10° semivertex angle cone----- 5600
calculation for swept and unswept wings through transonic speed range by use of steady-flow aerodynamic parameters----- 10998	Folles, Marvin W., appraisal of logging damage to advance reproduction of ponderosa pine----- 6485
characteristics of flap type control at transonic speeds, control-aspect-ratio effects----- 14536	Folls, <i>see</i> Aluminum foil—Metal foils.
characteristics of jet-flap helicopter rotor in hovering and forward flight----- 14752	Folding, deformations in expandable structures with particular application to toroidal shells----- 3161
factors affecting flutter characteristics calculated for swept wings by piston theory, etc----- 11067	Foley, Eugene P., nomination, hearing----- 15377
finite-span wings, flutter calculations by modified-strip analysis----- 14566	Foliage, <i>see</i> Brush.
flat single-bay panels, effects of thermal stress and buckling----- 1290	Folk, Hugh, private pension plans and manpower policy----- 12806
low aspect-ratio flat-plate surfaces at Mach numbers from 0.62 to 3.00----- 21002	Fomes igniarius, sporophores, Colorado aspen decay associated with----- 17490
orthotropic panels, flat rectangular with biaxial loading and arbitrary flow direction----- 19924	Fonda, N.Y., railroad accident----- 2450
panels, titanium skin, flat and curved, at supersonic speeds----- 5595	Fonseca, Mario R., relief----- 9849, 13400, 13690
sandwich-type flat panels----- 10985	Foutanna, M. G., lectures, Mar. 1, 8, 22, 29, 1962----- 7592
simply supported rectangular panels, postbuckling effects----- 7272	Food:
subsonic and transonic, 45° swept-back wing planform in air and in Freon-12----- 7273	abundance-----
thin flat-plate arrow wings, effect of aerodynamic heating----- 11064	basis of U.S. power (address)--- 9559
transonic, effects of sweep and aspect ratio on series of thin cantilever wings having tape ratio of 0.6----- 5593	nation's pride and responsibility (address)----- 14889
transability concept, application to flutter of finite panels and experimental results----- 18153	and nutrition, proposed program for expanded research, ARS report----- 18906
Flux (neutron), <i>see</i> Neutrons.	Army's irradiated food wholesomeness program, review----- 13246
Fly ash, <i>see</i> Flue dust.	caterer's ideas on personal welfare and ideological discipline, Communist China study----- 2852
Flyer, Eli S., prediction of unsuitability among first-term airmen from aptitude indexes, etc----- 18495	code of Federal regulations----- 10167
Flying, <i>see</i> Flight—Instrument flying.	consumption-----
Flying Tiger Line, Inc., accident----- 9735, 13314, 18711	and expenditures, India, Japan, and U.S.----- 2134
Flynn, Bernard W., jr., relief----- 11937, 13490, 16974	United States 1909-52, supplement 1962----- 18413
FM (radio), <i>see</i> Radio frequency modulation.	convenience and home-prepared, comparative cost to consumers----- 14865
FMC SP series----- 505, 2262-63, 4901, 10155-160, 12112, 19188-191.	demonstration, TV tips----- 5837
FNMA, <i>see</i> Federal National Mortgage Association.	dressings, mayonnaise, etc., FDC regs, amdt----- 12143-144
Foam generators, runway forming-tanker vehicle for fire fighting----- 18238	East European industries, translations----- 688, 770, 818, 884, 942, 994, 1050, 1071, 2498, 2512, 2563, 2671, 2713, 2765, 2849, 2871, 2927, 2951, 3000, 5117-18, 5228, 5303, 5394, 6060, 6727, 6776, 6831, 6847, 6907, 6926, 6977, 7009, 7659, 7093, 7111, 8581, 8607, 8628, 8680, 8725-26, 8780, 8796, 8818, 8830, 8933, 8961, 10362, 10421, 10510, 10530, 10543, 10565, 10577, 10588, 10594, 10631, 10650, 10740, 10743, 10781, 10790, 10829, 10833, 10874, 12394, 12403, 12434, 12450, 12473, 12541, 12563, 12647, 12692, 12718, 12729, 12739, 14091, 14119,
Foamed plastics, <i>see</i> Plastics.	
Focal infection, <i>see</i> Infection.	
Focusing, antipodal, note----- 18193	
Fodder, <i>see</i> Food for livestock.	

# INDEX 1963

	Entry
Food—Continued	
East European Industries, translations—Continued	
14156, 14169, 14275, 14316, 14416,	
15686, 15747, 15818, 15876, 15921,	
15958, 15975, 16011, 16040, 16227,	
17653, 17727, 17758, 17788, 17832,	
17870, 17941, 17978, 19405, 19460,	
19481, 19520, 19542, 19609, 20783,	
20908.	
F.D.C. regs.-----	4975, 10203, 12143-145
fallout and your farm food-----	4368
families with school children-----	16737
family—	
plans and costs for nutritionists,	
etc-----	1698
stockpile for survival-----	14859
flavor and texture, Eastern Experiment Station collaborators' conference, proceedings-----	16721
food and drug law history-----	19249
food, drug, and cosmetic act—	
definitions and standards for fruit butters, jellies, preserves-----	4975
enforcement and compliance report, monthly-----	4143
FDA enforcement and compliance-----	6472
notices of judgment-----	3976
notices of judgment, summarizing judicial review of orders-----	10205
text-----	4976
food, drug, and cosmetic laws, State officials enforcing, directory-----	13979
food for family with young children-----	4353
food for fitness, daily food guide-----	16743
food for peace—	
around world, community feeding programs, manual-----	5093
challenge (address)-----	9560
5-cent freedom from hunger commemorative postage stamp (poster)-----	11203
newsletter about activities under PL 480-----	10094
program (speech)-----	20293
use of abundance in international development-----	8423
food for young couple-----	27
food we eat-----	14876
food you eat and heart disease-----	18285
freeze-drying—	
bibliography-----	14593
prospects for industry-----	19091
guide for older folks-----	7565
home canning and preservation, helpful Government publications, list-----	11213
household consumption and dietary levels, United States, survey-----	4355
household consumption survey, 1955, report-----	4355
import detentions, report-----	12147
imported by U.S., 1961-----	8388
International Food Congress and Exhibition (remarks)-----	22
irradiation, Army program, review, hearing-----	15164
manufacturing industry, present and potential use of, egg products-----	13175
marketing, economic inquiry-----	13944
national food situation-----	3938
nursing home service-----	13008
nutrition facts-----	9223
nutritive values, conserving-----	16740
organisms, effect on fish growth and composition of fishery complexes, USSR study-----	8932
plentiful food, PF-series-----	4021

	Entry
Food—Continued	
preparation and serving equipment, Federal item identification guides for supply cataloging, supplements-----	3659
preservation—	
biochemical aspects of radiation method, USSR study-----	6640
by irradiation, bibliography-----	4553
products, effect on sales by combining kinds of retailer promotions-----	355
proper feeding of tumor patients during radiation treatment-----	20880
publications, price list-----	1393
radiation effect-----	10134
radiation pasteurization program, summaries of accomplishment, 2d annual contractors meeting, 1962-----	15009
radiation research, international conference-----	14613
radiation sterilization, microbiological response to varying types and methods of application of ionizing radiation-----	7416
radioactive substances in food, content and distribution, USSR study-----	12497
read labels, FDA publication-----	19246
regulations, Bolivia-----	2430
research and management for food, work of Fish and Wildlife Service-----	4950
retail prices by cities-----	4148
services, provision to college students, etc., 1961-62-----	13855
shopper's guide to U.S. grades-----	1697
standards, what consumers should know-----	19247
supplies in retail stores, 1962, civil defense study-----	1708
tubed, suitability for in-flight feeding-----	4394
utilization of wheat-----	15423
values, their derivation and use (paper)-----	1645
wholesale food-distribution facilities—	
Detroit area, research study-----	14864
New Bedford, Mass-----	14868
worktime required to buy food-----	7179
World Food Program to banish hunger from world (address)-----	5809
world forum, proceedings-----	4378
Yugoslav food products markets, 1956-60, examination-----	10565
see also Canned foods—Diet—Dried foods—Frozen foods—Nutrition—Rations—School lunches—also names of foods.	
Food and Agriculture Organization of United Nations:	
anniversary dinner commemorating founding (address)-----	14711
constitution, amendments and text-----	5739
Food and Drug Administration:	
approval of new drugs, facts for consumers-----	15540
Citizens Advisory Committee, report-----	6474
consumer information materials, list-----	17468
Detroit district headquarters, better, more efficient service to consumers, etc-----	6471
drug policies, interagency coordination, hearings-----	4781, 10014, 19054
F.D.C. regs-----	4975, 10203, 12143-145
fake medical devices, reports-----	8286, 20690

# JANUARY-DECEMBER

	Entry
Food and Drug Administration—Con. fakes and swindles in health field, catalog	19248
FDA conference on Kefauver-Harris drug amendments, and pro- posed regulations, proceedings	8288
FDA publications	6473,
12146, 15540, 19246-248,	20691
FDA, what it is and does, general information	12146
leaflets	8287, 17467-468,
museum	19249
protecting consumers of food, drugs, cosmetics, and house- hold chemicals, 1963	6472
report, 1962	13980
report on enforcement and com- pliance, monthly	4143
Food, drug, and cosmetic act, see Cosmetics—Drugs—Food.	
Food for animals, periodicity of hump- back whale feeding in south Atlantic Ocean, USSR study	8767
Food for cattle, see Food for livestock.	
Food for fish, albacore tuna food in Pacific	2288
Food for livestock:	
dairy cattle—	
concentrate rations fed, 1962	11337
roughage fed to milk cows	1564,
	16617
feed additives, needs for dairy cattle	14837
feed market news, weekly	3682
feed situation	3683
grain and feed statistics, supple- ment	13188
livestock fed annually, 1909-61, statistics	4376
Midwest feed contract programs, gains and losses for manufac- turers, etc.	8150
pelleted rations for beef cattle	4375
production, 1961	9719
analysis of ingredients	15057
sale by CCC for maintenance of foundation herds, penalties for misuse, report	13721
State feed laws, officials enforcing, directory	13979
use of microorganisms in feed pro- duction, USSR studies	17619
Food for poultry:	
broiler and turkey feed financing by cooperatives	20656
production, 1961	9719
analysis of ingredients	15057
Food lockers, see Cold storage.	
Food preservation, see Food.	
Food processing:	
fresh meat, centralized, for retail stores	18435
potatoes, bulk handling and ship- ping to plants	18432
South Carolina processors, problems and prospects	1474
Southeastern vegetable processing industry, marketing practices and management problems, 1960	5829
sweeteners used by U.S. indus- tries	351
Food processing machinery, USSR in- dustrial development, transla- tions	7120
Food service facilities, see Restau- rants, lunch rooms, etc.	
Food stamps:	
fish consumption by food stamp families, etc.	13958
pilot program, effect on retail food store sales in Fayette County, Pa., and McDowell County, W. Va.	8145
plan, operation, hearings	15295

Food stores, see Stores.	
Footie, Lydia A., relief	18974
Footlight (periodical)	3715
Footwear, see Boots and shoes.	
For commanders, this changing world	97,
1789-91, 4434-35, 5906-7, 7661- 62, 9645-46, 11528-529, 13232- 233, 14934, 16819-820, 18535- 537, 20318-319.	
Forage plants:	
Communist China, illustrated manual	8853
field research equipment and eval- uation of methods of establish- ing	9591
trends in crops varieties, 1962	8228
wheat pasture, monthly	4304
see also names of plants.	
Forage programs and cattle systems, Colorado mountain-meadow cattle ranches	8147
Foraminifera:	
recent, off Central America (series)	12230
Tertiary larger species from Guam	10289
Forbs, species for seeding chaparral burns, comparison	17492
Force and energy:	
concentrated forces, effect on elas- tic shell of arbitrary shape, USSR study	19386
energy budget at earth's sur- face	10756-757
energy deposition on thin-film polymeric materials, calcula- tion	19938
energy expenditure and environ- mental temperature, report	116
energy spectrum of electrons in outer radiation belt	7289
force and pressure measurements on canopy-fuselage configura- tions	5531
Ford, A., bioelectronic foundations for human engineering	11262
Ford, Frank B., evaluation of recruit- ing strategy with fluctuating availability, etc.	4406
Ford, Frederick W.:	
addresses, lectures, etc.—	
Apr. 19, 1963	10116
June 20, 1963	13905
June 28, 1963	13904
Ford, Richard G., area resource devel- opment	10123
Ford, T. F., adhesion-shear strength of ice frozen to clean and lubricated surfaces	11174
Ford Motor Co., wood pallets use	575
Foreclosure of mortgages, see Mort- gages.	
Foreign affairs, see International relations.	
Foreign Affairs Committee, House:	
calendar	3834
committee prints	4754,
6195, 11900, 18934-940	
hearings	6194,
7995-97, 9932-34, 11897-899, 11901, 13647, 18941-942.	
Investigations and studies—	
expenses, report	6125
U.S. foreign policy, authoriza- tion, report	6106
reports	4749,
7955-57, 9863, 9866, 9880, 13555, 13557, 13568, 13599, 15282, 17111, 17137, 17145, 20471, 20481-482.	
Foreign Affairs, National Academy of, see National Academy of For- eign Affairs.	

# INDEX 1963

	Entry
Foreign agents:	
nondiplomatic representatives in U.S., activities, hearings-----	6295,
10009, 13802, 15384, 17309,	
19050, 20608.	
registration act, administration, report, 1961-----	1154
Foreign Agricultural Service:	
appropriations, 1964, Agriculture Dept. hearings-----	9921
miscellaneous, FAS-M series-----	4977,
6477-78, 10207, 12148-149,	
13981, 15542-544, 20692.	
Foreign agricultural trade, <i>see</i> Agricultural products.	
Foreign agriculture, <i>see</i> Agriculture.	
Foreign agriculture circulars-----	3720
Foreign aid:	
A.I.D. and U.S. voluntary agencies, growing partnership-----	12259
Africa, U.S. operations-----	8021
print as Senate document, reports-----	6273, 7918
budget, 1964, amendment-----	7871
Communist China's economic aid-----	5405
community development review-----	15054
counterpart funds and AID foreign currency accounts-----	3569
economic assistance programs, guiding principles-----	19361
economic cooperation agreement with Austria, ERP counterpart settlement-----	3343
economic development agreement with Tunisia-----	7445
economic development, organization, planning and programming, papers prepared for United Nations conference-----	2440
economic, technical and related assistance, agreement with-----	
Central African Republic-----	11313
Colombia-----	1518
Costa Rica-----	1524
Paraguay-----	3346
financing (remarks)-----	19206
foreign assistance act of 1961, International Development Agency guaranties, opinion of Attorney General-----	19773
foreign assistance act of 1963-----	
hearings-----	9933, 11899, 13647, 13804
message from the President-----	7868
reports-----	15282, 15292, 20584
foreign assistance program, report, 1962-----	
departmental edition-----	19362
document edition-----	18802
foreign operations appropriations, 1964, hearings-----	18918
Laos, United States contribution for supervision and control, report-----	13773
Middle Eastern and African countries, report of study-----	19055
mutual defense and assistance programs, proposed, 1964, summary presentation-----	10347
operations in Latin America, hearings-----	4755
operations report-----	3996
program today, answers to basic questions-----	19360
scope and distribution of U.S. military and economic assistance program, report of committee to the President-----	9401
settlement of postwar economic assistance, agreement with Japan-----	1523, 11316
technical cooperation, agreement with-----	
Afghanistan-----	7449
Somali Republic-----	14715

	Entry
Foreign aid—Continued	
technical cooperation programs of United Nations system-----	20169
USSR—	
problem of aid to underdeveloped countries, translation-----	683
technical aid in developing medical industries-----	19727
voluntary—	
programs, reports of American registered agencies-----	14074
register of agencies-----	14073
relief programs, activities of registered agencies-----	5098
<i>see also</i> Military aid— <i>also</i> names of countries.	
Foreign assistance, <i>see</i> Foreign aid.	
Foreign born:	
adults, social security reader for English classes-----	11282
population of U.S., census, 1960-----	1876
Foreign Buildings Office, construction of Embassy office building and ambassadorial residence, Rabat, Morocco, GAO review-----	14004
Foreign Claims Settlement Commission:	
appropriations, 1964—	
hearings-----	11874
report-----	11848
claims programs administered, memorandum-----	8109
report, semiannual, 1962-----	15549
Foreign commerce, <i>see</i> Commerce.	
Foreign consular offices in United States, 1963-----	11295
Foreign countries:	
American-owned property, expropriation by foreign governments in 20th century, report-----	18935
American studies abroad-----	18374
banks, U.S. national, foreign branches, regulation-----	17438
central banks, economic policies and practices, materials-----	18791
chanceries, etc., in D.C., location in residential districts, hearing-----	13800
coffee producing, situation, programs and policies-----	13981
designations used in compiling foreign trade statistics, code classification, schedule C-----	11641
exportability of American system of industrial relations-----	10922
medical libraries, directory-----	12913
money market and exchange rates-----	2278
nations of world, status, official nomenclature, etc., State Dept. geographic bulletin-----	16574
new bond issues in U.S. market-----	12120
newly independent states, profiles-----	13068
nondiplomatic activities of representatives, study, authorization, reports-----	2083, 6243
passenger travel to and from U.S.-----	4140,
5044, 14046	
plant quarantine import requirements—	
logs and lumber-----	1653
summaries, list-----	9545
prices in key industries, economic policies and practices, materials-----	20448
social security, recent developments-----	1499, 9387
statistical publications, accession list-----	3726
sugar, exporting, data-----	15296
teaching positions, list of sources of information-----	13853
technical aid of Soviet Union in development of medical industry-----	20826
technological unemployment, experience in dealing with problem-----	19124

# JANUARY-DECEMBER

	Entry
Foreign countries—Continued	
visa of U.S. passports, fees charged, list	9397
see also Foreign agents—Military aid—also subject involved.	
Foreign crops and markets (periodical)	2305, 3721
monthly summaries	3722
Foreign currencies, see Money.	
Foreign developments in machine translations and information processing	2981,
8478, 8651, 8765, 8817,	10754,
10809, 10852, 12383,	12484,
14097, 14148, 14195,	14254,
14321, 14341, 14368,	15825,
15992, 16226, 17582,	17705,
17802, 19748, 20819.	
Foreign exchange:	
controls—	
Brazil	6607
Ethiopia	2431
Federation of Rhodesia and Nyasaland	6596
Indonesia	5076
Japan	2388
Libya	8420
Pakistan	2387
Philippines	2384
Republic of South Africa	10334
Senegal	6612
United Kingdom	2383
Venezuela	8415
Yugoslavia	2434
rates—	
Communist China	5405
monthly	3723
weekly	3724
Treasury and Federal reserve operations	8261, 19209
USSR system	6909
Foreign languages, see Language and languages—also names of languages.	
Foreign policy, see International relations.	
Foreign pre-diploma probationary work of students, USSR	8544
Foreign relations, see International relations.	
Foreign Relations Committee, Senate:	
calendar	3854
committee prints	4774,
6296, 6298, 8105-6, 8109, 10012,	
13773-774, 15359.	
consultative subcommittees, scope of coverage	13803
hearings	2091-93,
4775-77, 6294-95, 6297, 8107-8,	
8110, 10009-10, 10013, 13802,	
13804-805, 15384, 17309-10,	
19050, 20608.	
reports	18969,
18971, 20527, 20529-537, 20539-540, 20542, 20544-546, 20584, 20599.	
Investigations and studies—	
nondiplomatic activities of foreign principals, authorization, reports	2083, 6243
U.S. foreign policy, authorization, reports	2082, 6244
legislative history, 87th Congress, committee print	2092
reports	2082-83
9992, 11949, 11981, 13758-759, 13773-774, 15359.	
Foreign Service:	
act of 1946, as amended	4754
proposed amendments submitted by State Dept.	18937
annuities, adjustments, hearing	2091

	Entry
Foreign Service—Continued	
buildings act, 1926, amend—	
hearings	7995, 10010
law	17024
reports	7955,
7962, 9992, 13598,	15237
career opportunities	16569
department and foreign service series	7433,
11295, 14703-704, 16570-571,	
18324-325.	
employees, relief	7911, 18998, 20412
lists	1510, 3340
members, income tax deductions	10315
officer, career, State Department	14703
Rabat, Morocco Embassy office building and ambassadorial residence construction, GAO review	14004
Ramseyer rule print of proposed Foreign Service buildings legislation	18939
retired officers, accept employment by foreign governments, report	13774
see also Ambassadors—Consuls.	
Foreign Service Academy, establish, hearings	13805
Foreign Service Institute:	
basic courses—	
African languages, announce-	
ment	11216
Hausa	14707
Hungarian	13069
Igbo	5726
Kituba	21118
Swahili	7438
Twi	7457
Yoruba language	14735
Foreign social science bibliographies series	1900, 7764
Foreign trade, see Commerce—also names of countries or places—also names or class of commodities.	
Foreign trade routes, see Trade routes.	
Foreign-trade zones, laws, regulations, etc.	2309
Foreign-Trade Zones Board, report, 1962	12150
Foreigners, see Aliens.	
Forest conservation, see Forests and forestry.	
Forest experiment stations, see names of stations.	
Forest fires:	
bark characteristics and fire resistance of trees, literature survey	12195
control—	
effectiveness of model II Michigan sand caster	13987
fuel temperature counter	19258
fire control notes, quarterly	3685
Lake States research program	12153
litter fuels in red pine plantations	12179
logging slash flammability after 5 years	10215
moisture content of fine fuels and relative humidity	10255
Pacific Northwest, fire season, 1962	8292
Project Skyfire progress report, 1958-60	17473
prototype fuel-break in eastside ponderosa-Jeffrey pine type	8297
report, 1962	17470
seasonal moisture fluctuations in pocosin vegetation	10245
TB-25N evaluation as air tanker	10249
Forest Genetics, Southern Institute of, see Southern Institute of Forest Genetics.	



# INDEX 1963

Entry	Entry
Forest Haven:	Forest Service—Continued
sale of right-of-way, authorize—	research notes----- 6504-13,
law----- 20396	10231-236, 12166-185, 13984-
report----- 13739	985, 15559-574, 17476-499,
voluntary admissions, etc., report----- 17122	19253-264, 20694-704.
Forest lands, <i>see</i> Forests and forestry.	research papers----- 6514,
Forest nurseries:	10237-239, 12186-193, 13986-
forest tree nurseries, U.S., 1962,	990, 15575-585, 17500-501,
list----- 8307	19265-270, 20705-710.
tree planters' notes----- 2316-17,	resource bulletins----- 15586-588,
6527, 10250, 20712	17502-504, 19271-273
Forest pest leaflets----- 4981,	unauthorized diversion of revenues
8293, 10210, 15551-552, 17472	from sale of special permits
Forest plantations, <i>see</i> Trees.	for hunting and fishing in na-
Forest planting:	tional forests, GAO report----- 2335
California reforestation, chemicals	use of pesticides for disease and in-
for brush control----- 6495	sect control, value, safeguards,
conifers, direct seeding in Lake	etc.----- 16755
States----- 12188	Foresters:
experimental designs for simple	examination announcement----- 15112
planting and other reforesta-	safety inspections of trees in recre-
tion experiments----- 6496	ational areas, guide----- 15583
preplanting treatments for brushy	Forestry, <i>see</i> Forests and forestry.
old fields in southern Illinois----- 13986	Forest and forestry:
seeding test of direct depths for	abstracts pertaining to Communist
slash and longleaf pine----- 12185	China in Soviet abstracts jour-
tree planters' notes----- 2316-17,	nal----- 17977
6527, 8307, 10250, 20712	aerial photos, accuracy of ground
windbarrier and seeding, report,	point location----- 17481
1962----- 8307	aerial spraying, etc., of pesticides,
Forest products:	value, safeguards, etc.----- 16755
calculating optimum combinations	Alaska interior, early conditions----- 19250
from standing trees----- 20705	Arizona ponderosa pine forest—
carload waybill statistics, 1961----- 6628,	effect of logging on understory
10350	vegetation and deer use----- 4987
co-op shows sturdy growth----- 469	use of natural openings by deer,
demand and price situation, 1963----- 20289	elk, and cattle----- 4986
harvested in Hawaii, 1958 and	blueprints, advantages for field use----- 17480
1960----- 10224	California, seed lot information, re-
marketing----- 575	cording system----- 17486
production in Nevada, 1960----- 570	Caribbean forester----- 3498
profitable projects for woodlot own-	Chelan and Douglas Counties,
ers, self-help suggestions----- 18420	Wash., 1959-60, statistics----- 15587
Forest Products Laboratory:	chemical light meter, description
its work and aims----- 1684	and evaluation in forest re-
notes on treatment of wood with	search----- 10221
polyethylene glycol----- 12171	Communist China, alpine forests of
publications, lists----- 6484,	southwest, study----- 15719
box and crate construction and	conservation—
packaging data----- 12154	materials to help teach (list) -- 6489
lumbering, milling, and utiliza-	USSR conference----- 15670
tion of timber products----- 12155	cutting methods in mixed conifer
wood finishing----- 12156	swamps, Michigan----- 15579
wood preservation----- 12157	East European industries, transla-
report----- 12158	tions----- 688, 770,
Forest rangers:	818, 884, 942, 994, 1050, 1071,
at work, 1961 yearbook, Forest	2498, 2512, 2563, 2671, 2715,
Service Intermountain region----- 568	2765, 2849, 2871, 2927, 2951,
in your service, story of their	3000, 5117-18, 5228, 5303, 5394,
work----- 16730	6660, 6727, 6776, 6831, 6847,
Forest resources, <i>see</i> Forests and fore-	6907, 6926, 6977, 7009, 7059,
stry.	7093, 7111, 8581, 8607, 8628,
Forest Service:	8680, 8725-26, 8780, 8796, 8818,
administration of recreation and	8830, 8933, 8961, 10362, 10421,
other selected land use activi-	10510, 10530, 10543, 10565,
ties, GAO review----- 8320	10577, 10588, 10594, 10631,
appropriations, 1964—	10650, 10740, 10743, 10781,
hearings----- 6184	10790, 10829, 10833, 10874,
law----- 15158	12394, 12403, 12434, 12450,
reports----- 7939, 11951, 13616	12473, 12541, 12563, 12647,
career opportunities, nonprofes-	12692, 12718, 12729, 12739,
sional----- 13177	14091, 14119, 14156, 14169,
construct and maintain roads and	14275, 14316, 14416, 15686,
trails for national forests,	15747, 15818, 15876, 15921,
hearings----- 17331	15958, 15975, 16011, 16040,
land exchanges in Pacific North-	16227, 17653, 17727, 17758,
west region, GAO review----- 2325	17788, 17832, 17870, 17941,
lands administered by, regulations	17978, 19405, 19460, 19481,
government grazing----- 17475	19510, 19542, 19609, 20783,
management systems, description-- 4984	20908.
poster----- 10252	elementary sampling----- 1681
publications, price list----- 18278	Elmira-Williamsport region, com-
report, 1962----- 13983	parison of forest types and
	great soil groups----- 19313

# JANUARY-DECEMBER

	Entry
Forest and forestry—Continued	
fair labor standards act, applicability to forestry or logging operations	16648
field analysis of soil texture, importance of organic matter	12174
forest area trends in Minnesota counties	15572
forest genetics, bibliography, research, 1927-61	2312
forest industry statistics, 1962, Louisiana	19273
forest inventory statistics—Madison County, N.C.	3380
12-county area, southwestern Tennessee Valley	3379
forest plant geography of China	14294
forest recreation research, Pacific Southwest Forest and Range Experiment Station	20704
forest research notes, Pacific Southwest Station	10226-229, 12162-163, 15557
forest resources of western Montana	17502
forest survey releases—	
Intermountain Station	569-570
Southeastern Station	10242
Southern Station	12194
forest survey report, Pacific Northwest Station	2311
forestry bulletins, Tennessee Valley Authority	3379-80
forestry investigation notes	7471-72
forestry of China (periodical), translations	6975
forestry publications, price list	18278
fuel temperature counter	19258
Georgia Piedmont area, management of small woodland holdings 12 year report	10247
hardwood culls, methods and costs of killing	8291
Hemlock Experimental Forest guide	19252
how our forests serve us	4982
Hungary	731, 2454, 2669, 5227, 8769, 8960, 10707, 12605, 14393, 15897, 17657, 19643, 20876
hybrids between eastern and western white pine, growth and performance	10214
Industries, northeastern Minnesota, labor potential	6513
insects, conditions in United States, 1962, report	17471
internationally dangerous forest tree diseases	18437
inventory and woods utilization standards in southeast Alaska, comparison	12159
investment opportunities in forest land management	3382
logging slash flammability after 5 years	10215
management—	
assistance on private land, State and private forestry cooperation, fact sheet	8306
Interior Department's responsibility in forest conservation, northern hardwoods, 4 intensities of management	8367
volume inventories, test of aerial photo classifications	15580
Michigan, small forest ownership in urban fringe area	13990
military installations, woodland management	574
miscellaneous papers, Pacific Southwest Station	9662
miscellaneous publications series, Intermountain Station	2312-13, 6494-96, 10224-225, 12161

	Entry
Forest and forestry—Continued	
miscellaneous release, Central States Station	566
Mississippi's resources	1475
Missouri counties, forest area	6507
multiple use of family forests, make woodlands pay	18420
natural resources conservation, highlights in history	2368
New Hampshire, products	1449
new opportunities for forestry (talk)	5835
northeast Washington, statistics	15586
occasional papers, Southern Station	8305, 12195
Ohio's private recreation enterprises, directory	15556
Piedmont, hydrologic properties of Cecil and Lloyd soil series	6519
plants in Hawaii, common native and introduced, check list	12161
production and industry under area redevelopment act	12243
reproduction losses from slash disposal at Challenge Experimental Forest	19261
research notes	6504-13, 10231-236, 12166-185, 13984-985, 15559-574, 17476-499, 19253-264, 20694-704
Intermountain Station	571-572, 6485-86, 10213-214
Northeastern Station	6490, 10217-220
Pacific Northwest Station	6491, 8297-98, 10222
Pacific Southwest Station	6497-99
Rocky Mountain Station	4985-89, 6515-17, 17505
Southeastern Station	6518-23
research papers	6514, 10237-239, 12186-193, 13986-990, 15575-585, 17500-501, 19265-270, 20705-710
Intermountain Station	4983, 6487, 10215, 17473
Pacific Northwest Station	6492-93, 10223
resource bulletins	15586-588, 17502-504, 19271-273
Rumanian Forestry Research Institute, progress in silviculture	20918
selected references	10241
silvical characteristics—	
giant sequoia	8299
mountain hemlock	12160
silvical series, Pacific Northwest Station	12160
silviculture, controlling specific gravity of wood	13191
soil freezing, influence of management practices, northern Minnesota	12187
southern, deer browse plants	4980
southern forestry notes, Southern Station	4198
station notes, Central States Station	6481
station papers—	
Lake States Station	573-576, 6488
Northeastern Station	10221
Rocky Mountain Station	4990-92, 10240
Southeastern Station	6524-25, 8301-4, 10243-247
statistics, King County, Wash.	2311
technical notes—	
Lake States Station	577-579
Northern Forest Experiment Station	12159
technical papers—	
Central States Station	567, 4979, 6482, 8291
Pacific Southwest Station	2314-15, 6500-3, 8299, 12164, 15558

# INDEX 1963

Entry	Entry
Forest and forestry—Continued	Fort Miles Military Reservation, land, convey to Delaware by quitclaim deed hearing..... 18922
tree seed crop averages fair in Lake States, 1962..... 12173	Fort Mojave Indian Reservation, except from 25-year lease limitations, reports..... 7917, 19038
tropical forest notes..... 8294-96	Fort Niobrara National Wildlife Refuge, general information..... 13971
Ukrainian Poles'ye, lowland forest area, description..... 17888	Fort Peck Reservoir, wave observations..... 6360
West Virginia forestry research..... 15581	Fort Raleigh National Historic Site, excavations for Clittle of Raleigh..... 1344
West Virginia mountains, four forest practices, effect on stream-flow..... 10238	Fort Randall Dam, flow characteristics in flood-control tunnel 10..... 13886
western white pine silvics..... 10212	Fort Randall Reservoir: change name—law reports..... 17027, 13629, 13703
see also Forest fires—Forest nurseries—Forest planting—Forest products—National forests—Site indexes—Timber—Volume and yield tables—Wood lots—also names of forests.	Fort Sumter National Monument, general information..... 5638
Forgings:	Fort Totten Indian Reservation, Devils Lake Sioux Tribe, donate land to report..... 9910
military aircraft, noncompetitive procurement from ALCOA, GAO report..... 15595	Fort Union Trading Post National Historic Site, establish, hearing..... 19058
steel, current industrial reports..... 3574	Fort Wayne, Ind., Baer Field, weather observations, hourly, decennial census..... 21159
see also names of metals, etc., forged.	Fort Worth, Tex.: Amon Carter Field, weather observations, hourly, summary, decennial census..... 20241
Form letters, see Correspondence.	community improvement, workable programs, HHFA, GAO review..... 2333
Formaldehyde, perfusion and methylene blue gross staining technique in dry fixation of lung tissue..... 5889	electric facilities of area, map—occupational wage survey—departmental edition..... 7166, 6077
Forman, David H.: suit against U.S. for land title—law reports..... 9803, 7872, 8042	principal electric facilities of area, map..... 2266
Forman, Julia: suit against U.S. for land title—law reports..... 9803, 7872, 8042	Fort Yukon, Alaska, ground temperature observations..... 4844
Formosa: economic developments, 1962..... 6611	Fortinl, Anthony, experimental and predicted heat transfer in bell-shaped nozzle..... 16371
economy, basic data..... 6609	Fortran, see Electronic data processing systems.
Forms, blanks, etc.: guide..... 20010	Forts, see names of forts.
operating forms, Federal manual for supply cataloging..... 8138	Forwarders, see Freight forwarders.
see also names of departments, etc., issuing or using forms—also subjects.	Foschetti, John A., vehicle technology considerations for solar probe..... 11050
Formulation of probability of two economic problems, USSR..... 2560	Fossils, paleontology of Pennsylvanian and Permian rocks, Kansas..... 8334
Forney, A. J., large-diameter reactor use in synthesizing pipeline gas, etc..... 3084	see also Plants, Fossil.
Forsterite, P-T univariant equilibria of reaction forsterite + calcite-monticellite + periclase + CO <sub>2</sub> , experimental studies on Bowen's decarbonation series, II..... 16385	Foster, Gerald V.: effects of wing vertical location on stability and control characteristics at Mach numbers of 2.01 of canard airplane configuration, etc..... 5556
Fort, see name of fort, except when occurring as first word of town, etc.	winged reentry configuration, effect of longitudinal, etc., controls..... 11011
Fort Caroline National Memorial, general information..... 1352	Foster, Lee R., jr., tensile properties and sheet-bending properties of refractory metals at room temperature..... 3153
Fort Carson, Colo., airstrip construction project, hearings..... 15310	Foster, William C., address, Dec. 19, 1962..... 4441
Fort Clatsop National Memorial, general information..... 21042	Foster care for delinquent girls..... 1924
Fort Davis National Historical Site, general information..... 18204	Foster-home care, see Child placing.
Fort Greely, Alaska, mesoclimatic temperature differences in area..... 1436	Fougere, Paul F., spherical harmonic analysis..... 16770
Fort Laramie, Wyo., geology of area..... 19294	Fouling: antifouling paints, destruction of film-founding base by marine microorganisms, USSR study..... 17739
Fort Lauderdale, Fla., retirement income of the aging, hearings..... 2084	marine, in Soviet waters of Sea of Japan..... 15679
Fort Macon State Park: beach erosion control study, engineer report—departmental edition..... 265	poisons in antifouling paints, USSR studies..... 17675
document edition..... 409	
Fort Matanzas National Monument, general information..... 5636	

# JANUARY-DECEMBER

	Entry		Entry
Foulois, Benjamin D.:		Fracture of metals—Continued	
Air Force medal presentation, authorize—		catastrophic, of liquid-filled tanks impacted by high-velocity particles	12848
law	17037	steel structure, fracture analysis	
report	15208	diagram procedures for fracture-safe engineering design	18250
Foundations, see Charitable Institutions.		Fracture whiskers, see Whiskers.	
Foundations (charitable and educational):		Fractures, surgical treatment, USSR study	15731
expenditures for medical and health-related research and education, 1960	3178	Fralich, Robert W.:	
Foundries:		postbuckling effects on flutter of simply supported rectangular panels	7272
copper-base products, current industrial reports	3575	skid-rocker landings of space vehicles	11027
cupolas, use of calcined anthracite	16339	France:	
iron and steel, current industrial reports	3574, 16897	agriculture compared to Soviet failures, French study	752
4-H clubs:		air transport services, agreement	9430
horse program, guide for leaders	13185	Communist Party documents relating to Sino-Soviet controversy	6851
rural civil defense, club leader's guide	10125	convention of establishment—	
Four River Basins area, Fla.:		report	20546
flood control, etc., engineer report—		text, protocol and joint declaration	20521
departmental edition	4856	DeGaulle-Adenauer pact	7129
document edition	4689	development problems, contrast between north and south	17633
Four River Basins project, modify, report	17106	economic developments, 1962	10332
Fourmile quadrangle, S. Dak., geology and pegmatites of Black Hills	14020	French army, changes in policy, structure, etc., since Algerian war	15779
Fournier, Paul G.:		import tariff system	10342
pressure distributions on rigid wings simulating parawings	9159	Italy boundary, study	20149
static longitudinal stability characteristics of winged reentry vehicle having large negatively deflected flap-type control surface	21001	key role in grain sector of European Common Market	10206
Fourth-class mail rates, see Postage.		liquid metal studies	12846
Fourth of July, ring bells, reports	11978, 13577	livestock and meat industry	6477
Fowl pest control, Yugoslav rules	10685	nuclear armaments, scientific and economic aspects	19752
Fowler, Henry H.:		outdoor recreation survey	1380
remarks—		plant import requirements	4344
Feb. 14, 1963	5759	scientific and technical research, 4th plan	19484
Mar. 3, 1963	7499	sending gift packages to	2407
Mar. 4, 1963	7498	social bases of political parties	12435
Mar. 13, 1963	7500	steel wire rods, determination of no injury or likelihood thereof to U.S. industry	14739
Apr. 6, 1963	9469	Switzerland boundary, study	20156
Apr. 9, 1963	9470	titanium dioxide, determination of no injury or likelihood thereof to U.S. industry	20201
May 18, 1963	11363	trade missions to, 1963	15653
May 21, 1963	11362	treaties concluded with United States, continued application to Congo (Brazzaville), agreement	1530
July 23, 1963	14759	Francis Case, Lake	
Aug. 10, 1963	16634	naming—	
Sept. 20, 1963	18356	law	17027
Fox, Gordon D., forest products co-op shows sturdy growth	469	reports	13629, 13703
Fox, R. B., photodegradation of high polymers, pt. 4, photolysis of polymethyl acrylate in vacuum and in air	11191	Francis E. Walter Dam:	
Fox, Wyatt R., tactical decision-making, action selection as function of track load, threat complexity, etc., and weapon uncertainty	11507	designate—	
Foxworthy, R. L., ground water, Pullman area, Whitman County, Wash.	8353	law	13430
FPC, see Federal Power Commission.		report	13709
FPC R series	19192	Franco, J. J., navigation and sedimentation conditions at typical lock and dam, Arkansas River	15457
FPC S series	506, 2265, 4902, 8241, 13915, 19193	River	15457
Fraas, Foster:		Frank, Robert M., sawmill residues, etc., as raw materials for W. Va. wood-using industries	12189
electrostatic separation of granular materials	7202	Frankel, H. Meyer, development of tissue hypoxia during progressive hyperthermia	18501
linearization of adsorption data	1229	Frankenstein, Guenther E., load test data for lake ice sheets	19137
Fracture, see Brittle fracture.		Frankford Arsenal, reports	20012-13
Fracture of metals:			
aluminum alloys wetted with liquid zinc amalgam	20012		
brittle fracture initiation in mild steel	20124		

# INDEX 1963

Entry	Entry
Franklin, Jerry F.: mountain hemlock, bibliography with abstracts.....	10223
natural regeneration of Douglas- fir, etc., using modified clear- cutting systems.....	20708
Franklin, Ga.: Chattahoochee River, engineer re- port— departmental edition.....	2185
document edition.....	2000
Franklin County, Ala., forest inven- tory statistics.....	3379
Franklin D. Roosevelt Library: transfer functions— hearing.....	11905
message from the President.....	11761
report.....	13546
Franseth, Jane: does grouping make difference in pupil learning?.....	8161
grouping children in elementary school, bibliography.....	17376
Fraud: affecting older citizen, hearings— fakes and swindles in health field, FDA catalog.....	19248
fraud and mallability, enforcement action.....	3738
mail fraud inspection program of Post Office Department (re- marks).....	21073
Freche, John C., advanced tempera- ture, tantalum-modified, nickel- base alloy.....	9150
Frederick, Ralph H., Saratoga Springs, N.Y., climatic sum- mary.....	14774
Fredericksburg and Spotsylvania Na- tional Military Park, general information.....	7331
Fredericksburg Magnetic Observatory, magnetograms and hourly values.....	197
Frederiksen, R. L., case history of mud and rock slide on experimental watershed.....	12180
Free energy: formation— barium oxide and strontium oxide.....	5497
calcium tungstate, calcium molyb- date, and magnesium molyb- date.....	3098
vanadates of lead and manga- nese.....	9126
vanadium nitride and vanadium carbide.....	7214
Free enterprise, <i>see</i> Laissez faire.	
Free homesteads for all Americans, Homestead act of 1862.....	4632
Freeburger, Adela R., educational data, Ecuador.....	6327
Freed, Roy N., electronic data- processing equipment use, at- torney's point of view hear- ing.....	15329
Freedmen's Hospital School of Nurs- ing, announcement, 1962-63, 1963-64.....	11231
Freedom, <i>see</i> Liberty.	
Freedom Academy, establish hear- ings.....	13805
Freedom Commission establish hear- ings.....	13805
Freedom to the free, 1863 century of emancipation 1963.....	4609
Freeman, Orville L.: addresses, lectures, etc.— Aug. 3, 1962.....	42
Sept. 5, 1962.....	44
Sept. 8, 1962.....	22
Sept. 11, 1962.....	18
Freeman, Orville L.—Continued addresses, lectures, etc.—Continued	
Sept. 14, 1962.....	19
Sept. 18, 1962.....	1677
Sept. 25, 1962.....	41
Oct. 1, 1962.....	1676
Oct. 8, 1962.....	1673
Oct. 15, 1962.....	1674, 1688
Oct. 22, 1962.....	1675
Oct. 25, 1962.....	1689
Nov. 2, 1962.....	1723
Nov. 12, 1962.....	1672
Nov. 13, 1962.....	1687, 1716-17, 1721
Nov. 14, 1962.....	1671
Dec. 6, 1962.....	1670
Dec. 11, 1962.....	1722
Dec. 12, 1962.....	1678
Dec. 13, 1962.....	1669, 1696
Dec. 27, 1962.....	1724
Jan. 8, 1963.....	5810
Jan. 10, 1963.....	5811
Jan. 14, 1963.....	5813
Jan. 14, 1963.....	13038
Jan. 22, 1963.....	5812
Jan. 23, 1963.....	5809, 5841
Feb. 14, 1963.....	7556
Feb. 15, 1963.....	7555
Mar. 6, 1963.....	7554
Mar. 19, 1963.....	9558
Mar. 21, 1963.....	9560
Mar. 26, 1963.....	9559
Apr. 10, 1963.....	11464
Apr. 29, 1963.....	11468
May 2, 1963.....	14854
May 6, 1963.....	14846
May 19, 1963.....	14847
June 14, 1963.....	14848
Sept. 8, 1963.....	20271
Sept. 8, 1963.....	20275
Sept. 9, 1963.....	20274
Sept. 17, 1963.....	20273
Sept. 21, 1963.....	20272
Sept. 24, 1963.....	20292
Sept. 25, 1963.....	20282
Sept. 30, 1963.....	20293
Freeport, Tex.: hurricane survey, engineer report— departmental edition.....	410
document edition.....	239
saline water demonstration plant, report.....	14058
Freer Gallery of Art: brief guide.....	1495
oriental studies.....	583
Whistler Peacock Room and Prin- cess from Land of Porcelain, description.....	4993
Freese, Frank, elementary forest sampling.....	1681
Freeways, <i>see</i> Roads and highways.	
Freeze-dried foods, palatability tests.....	14870
Freezers, household, industry outlook for 1963 and review of 1962.....	1860
Freezing, particles, vertical migration in front of moving plane.....	4842
<i>see also</i> Refrigeration and refriger- ating machinery— <i>also</i> names of commodities, etc., frozen.	
Fregly, Melvin J., chronic exposure to hypoxia effect on blood pres- sure and thyroid function.....	9629
Freight: air, role in developing local econ- omies (remarks).....	11525
carload waybill statistics, 1961— agricultural products.....	8427
animals and animal products.....	6626
.....	8426
forest products.....	6628, 10350
manufactures, etc.....	10349
mileage block progressions by commodity groups and classes.....	14075
mileage distribution by type of car.....	8425



# JANUARY-DECEMBER

	Entry		Entry
Freight—Continued		Frenchman Creek, ground-water geology and pump irrigation in basin	15615
carload waybill statistics, 1961—		Freon-12, flutter characteristics of 45° sweptback wing planform measured in Langley transonic dynamics tunnel	7273
Continued		Frequencies:	
mine products	8428	natural uniform rectangular-cross-section free-free sandwich beams, analytical and experimental investigation	20989
territorial distribution by type of car	8429	standards and measurements, engineering circular	3236
tons of revenue freight originated and terminated by States and commodity class	10351	see also Radio frequencies.	
traffic and revenue	10348	Frequency meters:	
weight distribution by carloads	6630	AN/URM-32, technical manual, Navy calibration program	20003
commodity statistics, quarterly	3739	TS-33/AP, technical manual, Navy calibration program	9297
description guide, Defense Dept.	19075	Frequency modulation, see Radio frequency modulation.	
rail service costs	20758	Frequency shift keying, see Radio frequency modulation.	
see also Shipments.		Frequency steering of beam in antenna arrays, USSR study	5123
Freight Cars:		Freshwater Bay, geology of area	6545
adequately supply, insure, hearings	17306	Fresh-water fauna, characteristics of aquatic fauna composition in relation to salinity of the medium, USSR study	17749
bulk products, portable recirculation system for fumigating	13172	Fresh water fishes, see Fish and fisheries.	
industry, outlook for 1963 and review of 1962	4546	Freshwater and Marine Primary Productivity Measurement Conference, see Primary Productivity Measurement, Marine and Freshwater, Conference.	
private car lines, transport statistics, 1961	2453	Fresno, Calif., Fresno Air Terminal, weather observations, hourly, decennial census	9494
Freight forwarders:		Frilant division, see Central Valley project.	
carload waybill statistics, 1961	2446	Friction:	
major contributor to international trade (remarks)	10156	characteristics of alloys and coatings at elevated temperatures	4496
ownership and control, amend interstate commerce act—		liquid lubricants in plastic compression	20015
hearings	8001, 10005	nickel and iron in vacuum to 10 <sup>-6</sup> millimeter of mercury, influence of microstructural inclusions	11046
report	11982	properties of polyethylenes and perfluorocarbon polymers	14633
prohibit control of or by other carriers, report	13545	surface of elastomers, reducing, studies	18246
revenues, expense, and statistics	4153	transfer temperature gradients effect for laminar flow of gases through heated channels	15011
transport statistics, 1961	641	vehicular measurements of effective aircraft runway friction	9456
Freight rates:		see also Skin friction (aircraft).	
cost of transportation by class 1 and 2 motor common carriers—		Friction layer, atmospheric, of wind profiles, analysis	18453
East-South territory	5101, 10352	Fried, Charles, color notation systems handbook	9314
eastern-central territory, 1961	5102, 10353	Friedlander, Alan L., guidance perturbations for low-thrust Mars orbiter mission using Snap-8	1278
south-central territory, 1961	8430, 10355	Friedman, Jesse A.: labor law and practice in—	
Southern region	5103, 10354	Costa Rica	9045
discriminatory ocean rates and balance of payments, hearings	17054, 20447	Guatemala	9047
dual-rate contract agreements, authorize use by steamship conferences, extend law—		Friedman, Robert, performance of short turbojet combustor with hydrogen fuel in quarter-annulus duct, etc.	10976
law	7824	Friedman, Sidney, determination of phenols in coal tars and hydroxyl content in coal by forming trimethylsilyl ethers	9110
report	8047	Friedmann, Herbert, host relations of parasitic cowbirds	12915
fling in foreign commerce, problems of regulation (remarks)	505		
railroad carload traffic, indexes 1953-61	6634		
railroad traffic, fluctuations compared with production, 1958-60	6633		
regulations, foreign trade (remarks)	4901		
restructuring for computer age (remarks)	13349		
transportation act of 1963, hearings	15319, 17176		
transportation acts amendments, 1962, hearings	2054		
Freight trains, see Railroads.			
Freitag, Ruth S., agricultural development schemes in sub-Saharan Africa, bibliography	18053		
Fremont Canyon powerplant and power conduit, technical record of design and construction	11256		
French army after Algeria	15779		
French Creek Basin:			
flood control, engineer report—			
departmental edition	411		
document edition	311		
French dressing, definitions and standards of identity, amds	12143-144		
French fried potatoes, see Potatoes.			
French language, machine translation to Russian, USSR study	12721		

# INDEX 1963

	Entry		Entry
Friedmann, Zoltan, relief.....	18827	Frozen ground :	
Friend, Reed E., Spanish-American wage workers on U.S. farms, economic, etc., characteristics.....	8144	bibliography on freezing and thawing of soils.....	14832
Friends of British Guiana : activities, hearings.....	4759, 13772	forest soil freezing and influence of management practices, northern Minnesota.....	12187
print additional copies of pt. 1 and 2, report.....	11862	Tsinghai-Tibetan Plateau, preliminary studies.....	8870
Friendship :		Fruchter, Benjamin :	
treaty with—		open-ended inventory in eliciting task statements from job incumbents.....	18493
Luxembourg.....	11323	prediction of airman success from responses to items of Kelley activity preference report.....	64
Muscat and Oman, text, report.....	20527	Fruchter, Dorothy A., development of airman classification test, 1963.....	9623
Pakistan, report.....	20546	Fruit :	
text, protocol, etc.....	20520	canning industry, outlook for 1963 and review of 1962.....	4514
Friichtenicht, J. F., ionization associated with hypervelocity impact.....	18165	carlot conversion factors, table supp.....	1619
Fringe benefits, <i>see</i> Employee benefit plans.		culture, etc., publications, price list.....	11223
Frio River, vicinity of Three Rivers, Tex., flood control, authorize survey, report.....	15248	deciduous, foreign agriculture circulars.....	3720
Frish, S. E., transition probabilities and level population densities by self-absorption of radiation.....	20303	dried, foreign agriculture circulars.....	3720
Fritch, D. J., unmanned system for recording stresses and accelerations on ships at sea.....	16556	export acts.....	6
Fritz, Raymond L., silver hake.....	552	firmness, mechanical thumb for measuring.....	11456
FRL, <i>see</i> Feltman Research Laboratory.		foreign trade prospects.....	2306
Frogs :		fresh—	
oocytes, quantitative data, USSR study.....	17922	market news, weekly summary.....	3741
raising, commercial possibilities and limitations.....	10192	prices, 1962.....	11466
Frome, Julius, ASTIA chemical thesaurus.....	1792	radiation pasteurization process, research and development program (remarks).....	18610
Frommer, D. W., Lake Superior iron resources, further metallurgical evaluation of Mesabi Range nonmagnetic taconites.....	1243	seasonal movement guide for re- porting unloads.....	1618
Front Range :		shipsments by States, commodities, etc., 1962.....	9525, 13136
Colorado, east flank, structural geological survey.....	14025	unloads—	
quaternary deposits and fossils in relation to geomorphology.....	10290	eastern cities by commodities, States, etc.....	5784, 7531, 14817, 20258
Front Royal Station, beef cattle research, progress report.....	1656	midwestern cities, by commodities, States, and months.....	5786, 9527, 14819, 20260
Frost, K. J., detector for low energy gamma-ray astronomy experiments.....	9172	100 cities, 1962.....	7528
Frost, W. T., water supply outlook and Federal-State-private cooperative snow surveys for Oregon.....	4289	southern cities, by commodities, States and months.....	5787, 7532, 14820, 18377
Frost :		western cities by commodities, States, etc.....	5785, 9526, 14818, 20259
conditions, pavement design, engineering manual.....	10085	frozen, economic inquiry into marketing.....	13944
damage to red pine conelets.....	6512	fruit situation.....	3744
heave characteristics of slag-fly ash-line base-course mixture, laboratory evaluation.....	12086	industry, fair trading under perishable agricultural commodities act.....	18382
heaving of piles, Fairbanks, Alaska.....	10278	market news service.....	11425
soil, relationships among air, snow, and soil temperatures.....	10234	marketing facilities of San Francisco.....	20281
soils, behavior effects, test results.....	2189	Mexican, fumigation with ethylene dibromide, manual.....	20267
vertical migration of particles in front of moving freezing plane.....	4842	noncitrus, production, use, value, by States, 1961-62.....	16615, 18340
Frostbites, description and treatment, USSR study.....	5166	processed—	
Frozen foods :		and related products, regulations governing inspection and certification.....	13153
commercially frozen, consumer practices in handling and storing, two cities, two seasons.....	16742	inspection, Agriculture Department services.....	7537
precooked, bacteriological survey.....	2304	plants under USDA continuous inspection, list.....	13137
<i>see also</i> Cold storage—also names or classes of foods frozen.		supplement.....	7530
		standards for grades.....	16703
		processing industry, industrial waste guide.....	1410

# JANUARY-DECEMBER

	Entry		Entry
Fruit—Continued		Fuel—Continued	
terminal velocities of small fruits	20264	industry, Communist China, trans-	
Texas, truck-rail and sea-land		lations	651,
shipping tests	5832	914, 1030, 1102, 2553,	2699,
tree fruits for high altitude section		2792, 2913, 6739, 6870,	7044,
of central Great Plains	1627	8456, 8482, 8533, 8842,	8983,
western, marketing, long-term out-		10440, 12347, 12724,	14135,
look	10051	14181, 15966, 16089,	19382,
wholesale market, organization—		19560, 19667, 19742,	20861,
Miami, Fla	7574	20913.	
St. Petersburg, Fla	7574	jet atomization, theory	21010
Tampa, Fla	7574	litter fuels in red pine plantations	12179
see also Citrus fruit.		mineral-fuel industries review, min-	
Fruit butters, definitions and stand-		erals yearbook chapter	1255
ards	4975	mineral fuels and hydropower in	
Fruit juices:		U.S., since 1800, production	7211
consumer purchases	3551	minerals yearbook, 1961—	
frozen, economic inquiry into mar-		departmental edition	9116
keting	13944	document edition	7850
see also names of fruit juices.		publications, price list	18280
Fruitland Mesa project, construction,		retail prices and indexes	4150
report	17071	statistics of railroads	3746
Fruits, see Fruit.		temperature counter	19258
Frustration, induced, energy dis-		turboljet performance and operation	
charge resulting, individual		at high altitudes with hydro-	
differences	7196	gen and Jp-4 fuels	1260
Frutiger, Hans, avalanche control in		USSR—	
starting zone, translation of		fuel-power balance	6858
Swiss guidelines	4990	mineral-fuels industries, 1928—	
Frutkin, Arnold W., international co-		58, statistical survey	6006
operation in space	9645	see also Fuel oil—Motor fuel—Re-	
Fry, Edward R., measures of member		actor fuels.	
bank reserves	15504	Fuel briquets, see Briquets.	
Fry, Z. B., procedure for determining		Fuel cells, see Electric batteries.	
elastic moduli of soils by field		Fuel elements, see Reactor fuel ele-	
vibratory techniques	13883	ments.	
Frye, Robert E.:		Fuel oil:	
advertising procedures and prac-		ammonium nitrate mixtures, bullet	
tices of agricultural commod-		sensitivity, studies	10945
ity promotion groups	1703	bunker oil, foreign trade reports	4258
promotion of farm products by agri-		burner fuel oils, petroleum prod-	
cultural groups	7571	ucts surveys	1228, 18088
Fryer, John, labor in Cyprus	14461	desulfurizing residual fuel oil	7212
FSK (frequency-shift-keying), see Ra-		diesel—	
dio frequency modulation.		fuel filtration, USSR study	6899
FSLIC, see Federal Savings and Loan		petroleum products survey	9117
Insurance Corporation.		toxicity to Douglas-fir cones	17485
FTC, see Federal Trade Commission.		distribution systems, slow-flow-	
FTC-TIH series	12036, 16774	eters as measuring device,	
Fu Chao, see Chao Fu.		evaluation, report	18195
Fucello, Gaetano, relief	20552	injection in experimental blast fur-	
Fuchsberg, Robert R., family income		nace	3103
in relation to selected health		insoluble precipitates formed while	
characteristics, United States	16538	heating, dispersion, USSR	
Fuel:		study	6839
AMF on-power refueling system for		petroleum distillate, separation and	
Douglas Point Plant, compo-		characterization of polar mater-	
nent feasibility test	120	ial	19869
briquets and packaged fuel minerals		petroleum jet fuels thermal stabili-	
yearbook chapter	16321	ty research, survey	1206
conventional and nuclear fuels,		sulfur-containing fuel distillates,	
competitors or partners? (re-		influence of products of com-	
marks)	11587	bustion on construction mater-	
farm, use, storage capacity, stocks		ials of gas turbines	18512
in Central and Southern		Fuel rods, see Reactor fuel rods.	
States	13092	Fuel tanks, see Tanks.	
Federal item identification guides		Fuels, see Fuel—Reactor fuels.	
for supply cataloging, suppl-		Fuentes-Marins, Rafael A., isolation	
ments	3657	of enteroviruses from baboon	5892
Federal supply catalog—		Fugate, Arden D., recovery of low-	
identification list	19076	silica cryolite from siliceous	
management data list	19077	fluoride offgases	7222
flow, dynamic relation of ramjet		Fulbright program, see Education.	
pressures and fuel flow, simpli-		Fulkerson, Frank B.:	
fied theory	7231	aluminum fabrication in Pacific	
fuels and electric energy used by		Northwest, economic survey	1201
industry groups, annual sur-		mineral industry of—	
vey of manufactures, 1961	4572	Idaho	20956
industries, employment and in-		Montana	3064
juries, minerals yearbook chap-		Oregon	19851
ter	19829	Washington State	1224
		Full field seismic modelling	18450

# INDEX 1963

Entry	Entry
Fuller, Dennis E.: effect of cross-section shape on aerodynamic characteristics of bodies at Mach numbers, etc. 7275 static stability investigation of pro- posed Project Fire space-ve- hicle and reentry package con- figurations 1295 three-rocket vehicle at Mach num- bers from 1.80 to 4.63 includ- ing effects of fin size, fin cant, etc. 14579	Furnaces: continuous, automation, metallur- gy, USSR study 17640 equipment, Federal item identifica- tion guides for supply catalog- ing, supplements 3655 laboratory-scale pulverized-coal- fired, process development in removing sulfur dioxide from hot flue gases, design and op- eration 20964 vertical, improvement in sintering technology, USSR study 12519 see also Blast furnaces—Electric furnaces—Fluidized bed reac- tors.
Fulton, Joseph F., new job horizons in missile and spacecraft man- ufacturing 3039	Furnishings (household), see House- hold goods.
Fulton, Patti J., relief 7881	Furniture: Federal item identification guides for supply cataloging, supple- ments 3659 household— current industrial reports 4583 industry outlook for 1963 and re- view of 1962 4525 wood, industry wage survey 16290 retail furniture report 4149
Fulton, R. A., respiratory devices for protection against pesticides 9538	Furniture stores, see Stores.
Fulton County, Ark., smaller commu- nities program of Employment Security Bureau 2175	Furno, Aldo L., gas explosion hazards associated with bulk storage of molten sulfur 7221
Fumich, George, Jr., remarks, Dec. 14, 1962 1195	Furry, Margaret S., detergents for home laundering 18424
Fumigation: bulk products in freight cars, port- able recirculation system 13172 European pine shoot moths on or- namental pines, procedures and equipment 6493 Mexican fruits with ethylene dibro- mide, manual 20267	Fused-salts, see Salts.
Functions (mathematical), see Math- ematics.	Fuselage: force and pressure measurements on canopy-fuselage configura- tions 5531 forward parts, static pressure and boundary-layer characteristics of various cross-sectional shapes at Mach number of 2.01 5533 helicopter, wind-tunnel tests, er- rata 7256
Fund raising: voluntary health and welfare agen- cies within Federal service, manual 11666 change 20382	Fuses (ignition devices): aircraft bomb, ordnance pamphlet 12959
Fundamentals of electricity for air- craft maintenance 1743	Fuses (safety devices): ballistic-missile fuse mechanisms, insulated and uninsulated, sub- jected to simulated reentry as aerodynamic heating, heating and impact tests 18127
Funds: Federal, for education and related activities 17374 stock and related consumer, Defense Dept., GAO review 2334 USSR, enterprises, turnover analy- sis 19734 see also Land conservation funds— Money—Public funds—also names of departments, etc., for which funds are used—also subjects for which funds are used.	Fusion, controlled, nuclear research conference, proceedings, Salz- burg, Sept. 4-9, 1961 14958
Funeral Peak quadrangle, Calif., ge- ology 14024	Fussell, W. B.: dynamic thermal vacuum technique for measuring solar absorp- tance, etc., of spacecraft coat- ings 9179 errata 18137 portable integrating sphere for monitoring reflectance of space- craft coatings 9178
Fungi, see Chaetomiacae — also names of fungi, or fungous diseases.	Future of alliance for progress 5906
Fungicides: Federal insecticide, fungicide and rodenticide act, amend— hearings 18917, 19041 report 19034 minimize injurious effects, hear- ings 15324 notices of judgment 9549, 16718	Future of Nation's atomic power pro- gram 4499
Fungous diseases, yellow birch seeds and seedlings 20707 see also Medical mycology.	Futures, see Commodity exchanges— Speculation.
Funk, David T.: hybrid poplars on Ohio spoil banks, revised bibliography of strip-mine reclamation 566	Fuzes, see Fuses (ignition devices).
Fuquay, Donald M., project Skyfire progress report, 1958-60 17473	
Fur: catch in U.S., 1962 17464 furs, Federal item identification guides for supply cataloging, supplements 3659 hatters' fur, Tariff Commission re- port 7467	

## G

G.A.O., see General Accounting Office.	
G.S.A., see General Services Admin- istration.	
Gabbro, 2 layered stocks in Fair- weather Range, Alaska, geology and petrology 10279	

# JANUARY-DECEMBER

	Entry		Entry
Gabelman, John W.:		Galvanomagnetic effects in polycrystalline many valley semiconductors	19913
petroleum resources etc., Pucallpa region, Peru	14998	Galvanometers, electronic, Navy calibration program, technical manual	9290
reconnaissance		Galveston, Tex.:	
Iquitos area, Peru	14999	aerial radiological measuring survey, ARMS-2, of area	5930
Peruvian coast, etc.	14997	municipal airport, weather observations, hourly, decennial census	7508
southern Peru	9685	Galveston, Biological Laboratory, see Biological Laboratory, Galveston	
uranium in Cuzco-Anta area	11581	Gambia, official publications, bibliography	19810
Sayapullo Mine area, Cajamarca Department, Peru	16854	Game and game birds:	
Gabon:		migratory bird regulations, Federal, 1963-64	17461
investment guaranties, agreement	14713	migratory birds, Federal regulations governing hunting, importation, etc., 1963-64	15535
investment law	5065	wild turkeys on southeastern farms and woodlands, general information	20285
newly independent nation, fact sheet	9394	see also Water birds.	
Peace Corps program, agreement	1557	Games:	
Gadolinium oxide, high temperature spectral emissivity	14987	between finite automation and partner using mixed strategy, USSR study	12333
Gages:		industry, outlook for 1963 and review of 1962	4529
plug, plain cylindrical—		theory of games, methods and problems as applied to naval studies, USSR study	12464
go, etc., military standard	19083	see also Olympic games.	
not go, military standard	20620	Gamma rays:	
plug thread—		comparison of gamma irradiation facilities	7600
go, class X, military standard	20618	determination of sediment density	1628
HI not go, military standard	20619	gamma-radiation, biological effects, USSR study	19472
LO (not go), military standard	20622	low energy, detector for astronomy experiments	9172
setting, class W, go, military standard	20621	neutron-gamma ray spectrometer, description	7587
precision measurements and calibration standards, selected papers, errata	9201	twenty-four hour periodicity of mitoses in mice following action of gamma rays	17677
ring, plain—		Gamma spectrometers, see Spectrometers	
go, military standard	10042	Gamser, Howard G., nomination, hearing	8127
not go, military standard	10043	Gansner, David A.:	
ring, thread—		charcoal production in Central States, 1961	6504
go (class X), etc., military standard	19081	pulpwood production & consumption in Central States, 1961	6482
LO (not go), military standard	19082	timber—	
used by Weather Bureau, description	7516	resources of southern Cumberland region, Kentucky	19271
see also Electric gages—Piston gages—Pressure gages—Rivers—Strain gages—Vacuum gages.		volume in Missouri counties	15560
Gaging stations:		Gant, Duplain R., statistics on public institutions for delinquent children, 1962	15092
Columbia River basin, base flows as of Nov. 1, 1962	2338	GAO, see General Accounting Office.	
Pacific Northwest, annual peak water discharge, 1962-63	17520	Gapcynski, John P.:	
stream, low-flow frequency curves in eastern U.S.	14035	lunar return mission, analysis	16403
Gainer, Patrick A., computing effect of additional observation on previous least-squares estimate	3156	pressure-distribution investigation at Mach no. 2.01 of 45° swept-back-wing airplane, etc.	7232
Gaines, Edward M., grading ponderosa pine and sugar pine saw logs in trees	15558	Gaps in State programs for juvenile offenders	1925
Gair, Jacob E., geology and ore deposits of Nova Lima and Rio Aclma quadrangles, Minas Gerais, Brazil	601	Garages:	
Galant, David C., basal area table for diameters from 1 to 240 inches	10225	farm, building plan	11462
Galena, chloridization by contact with chlorides	20967	parking, blast resistant community shelter, underground type design	13318
Gall rust, Eastern, description, control, etc.	15552	Garbage, see Refuse.	
Gallie acid, see Sodium gallate.		Gardenias, culture	18428
Gallinule, hunting, possession, transportation, importation, Federal regulations, 1963-64	15535	Gardening, fertilizer, how much to use	13169
Gallitto, Lucia C., relief	13473, 16985, 17226	see also Gardens.	
Gallium sesquioxide, thermodynamic data	9127		
Galloway, George B., limitation of debate in Senate	17194		
Gallup, N. Mex., consumer expenditures and income, 1960, advance report	16274		
Galvanic skin response, influence of cooling of adjacent areas on GSR and base resistance of an isothermal site	20313		



# INDEX 1963

Entry	Entry
Gardens:	Gas—Continued
ant control..... 5820	natural—
eastern farmer co-ops, services... 6379	act—
fertilizers, selecting..... 9571	amendments, hearings..... 2086
home and garden bulletins..... 26-29,	regulations under, changes..... 2267
1697, 4353-54, 5820-21, 7565-	helium-bearing, low-temperature
67, 9571, 11452, 13167, 14858-	phase equilibria—
859, 16737-741, 18423-427.	Hansford gas..... 3099
home garden—	Hogback gas..... 18096
cabbage insect control..... 7566	liquids and liquefied refinery
nematodes, control..... 7561	gases, mineral industry sur-
Gardner, Kelsey B.:	veys, monthly..... 3943
trends in growth of farmer coopera-	minerals yearbook chapters..... 1227,
tives, 1950-60..... 8204	20963
what are patronage refunds..... 8207	producers sales to pipeline com-
Gardner, Richard N., statements, Dec.	panies, 1961..... 8241
10 and 13, 1962..... 5727	rate change procedure, hearings,
Garellis, Edward, pulsed neutron ap-	rate schedules, lawfulness, hear-
plication to power reactor	ings..... 2086
startup procedures..... 9679	report, quarterly..... 3942
Garfield, Frank R., economic change	statistics of companies, 1961..... 506
and economic analysis..... 19205	utilization in ferrous metallurgy,
Garfield County, Utah, geology of	USSR study..... 2466
Capitol Reef area..... 20732	natural gas companies—
Garfinkle, Stuart H.:	depreciation practices..... 19193
length of working life for males,	records, preservation, regula-
1900-60..... 14437	tions..... 10163
table of working life for men, 1960..... 14483	pipeline, synthesizing by hot-gas-
Garland, James D.:	recycle process, use of large-
occupational wage surveys—	diameter reactor..... 3084
Atlanta, Ga..... 16282	processing in Yugoslavia, develop-
Beaumont-Port Arthur, Tex..... 16278	ment and problems, transla-
Chattanooga, Tenn.-Ga..... 3033	tions..... 15705
Dallas, Tex..... 7162	publications, price list..... 18280
Fort Worth, Tex..... 7106	radiating, propagation of plane
Houston, Tex..... 18037	acoustic waves..... 12889
Jackson, Miss..... 10905	retail prices and indexes..... 4150
Memphis, Tenn..... 10900	unsteady-state flow, laboratory test
Miami, Fla..... 9058	method..... 19872
New Orleans, La..... 16906	well drilling, machinery and equip-
San Antonio, Tex..... 18033	ment industry trends..... 150
Garments, <i>see</i> Clothing.	<i>see also</i> Pipe lines.
Garner, W. W., effects of light on	Gas analyzers:
plants..... 7540	thermochemical, for continuous de-
Garnishment, <i>see</i> Attachment.	tection of oxygen..... 18521
Garrett, J. L., engineering tests of	use of ionization gage as quantita-
experimental T 11 aluminum	tive analyzer for BI-gaseous
airplane landing mat..... 20653	mixtures..... 3155
Garrison diversion unit, <i>see</i> Missouri	Gas appliances:
River Basin project.	household and commercial, U.S.
Garver, Harry L., lightning protec-	markets in—
tion for farms..... 7563	Australia..... 147
Gary, Howard L., tamarisk removal	Austria..... 13262
reduces water-table fluctua-	Belgium..... 7737
tions in central Arizona..... 4988	Finland..... 13263
Gary, James H., chemical and phys-	Honduras..... 18615
ical beneficiation of Florida	Iran..... 18616
phosphate slimes..... 5490	Iraq..... 18617
Gary, Ind.:	Italy..... 7735
electric facilities of area, map..... 517	Ivory Coast Republic..... 18618
principal electric facilities, map..... 2266	Mexico..... 18619
Garza, Sergio, geology and ground-	New Zealand..... 18620
water resources of Winkler	Panama, Republic of..... 18624
County, Tex..... 5034	Paraguay..... 18621
Gas:	Peru..... 18622
gasification of bituminous coal with	Philippines..... 18623
oxygen in pilot plant equipped	El Salvador..... 18614
for slurry feeding..... 1251	Switzerland..... 13264
gasification of solid-fuels using	Uruguay..... 20339
nuclear heat, evaluation..... 11565	West Germany..... 7736
Industry, injury experience, 1962..... 20944	Gas chromatography, <i>see</i> Chromatog-
interstate compact to conserve, con-	raphy.
sent of Congress—	Gas-cooled reactors, <i>see</i> Reactors
hearings..... 13659, 19057	(atomic).
law..... 17045	Gas dynamics in space exploration... 5551
reports..... 15357, 17110	Gas ejectors, <i>see</i> Ejectors.
ionized collision-dominated, spheri-	Gas embolism, <i>see</i> Embolism.
cal electrostatic probes theory..... 18577	Gas Hills, Wyo., mining practices at
lease no. Sacramento 037552-C,	4 uranium properties..... 9112
reinstate and validate, report..... 15279	Gas hydrates, compounds, bibliog-
leases, agreement with Navajo	raphy..... 19348
Tribe of Indians, approve, re-	Gas pipe lines, <i>see</i> Pipe lines.
ports..... 17270, 20485	Gas turbines, <i>see</i> Turbines.
	Gas utilities, industry wage survey... 19793

# JANUARY-DECEMBER

	Entry		Entry
Gascolgne, H., wide-temperature-range springs	7598	Gasoline service stations, <i>see</i> Service stations.	
Gases:		Gastric cancer, <i>see</i> Cancer.	
absorption by active metals	18508	Gastrointestinal tract, tumors induced by radioactive cerium (Ce-144), USSR study	15844
analyzers, quantitative, use for Bi-gaseous mixtures	3155	Gastropods, <i>see</i> Rapan.	
atmospheric, congeries of absorption cross sections for wavelengths less than 3000 Å	19895	Gates, Joseph S., hydrogeology of Middle Canyon, Oquirrh Mountains, Tooele County, Utah	19324
blast furnace top gas, gravimetric method for analyzing	5494	Gates, Paul W., free homesteads for all Americans, Homestead act of 1862	4632
combustion—		Gates, vertical lift crest gates, engineering and design manual	2210
flammable atmospheres, biological formation	3085	Gatestown, N.Y., population, special census	18696
gas properties, effect on turbojet-engine performance with hydrogen as fuel	1259	GATT, <i>see</i> General agreement on tariffs and trade.	
methane-air products, heat transfer and pressure distributions compared with air	1299	Gaule, Gerhart K., occurrence of superconductivity among elements, etc.	18306
comparison of 2 melting-pressure equations constrained to triple point using data for 11 gases and 3 metals	21028	Gault, Donald E., spray ejected from lunar surface by meteoroid impact	9182
electronegative, breakdown voltages at low pressures	12872	Gauss' hypergeometric function, <i>see</i> Equations.	
explosion hazards associated with bulk storage of molten sulfur	7221	Gaussmeters, rotating coil, measurement of M/E positions for mass spectrometer	11564
flue, sulfur dioxide removal, process development	20964	Gavett, Earle E.: truck crop production practices—Broward and Palm Beach Counties, Fla., labor, power, and materials by operation	2126
high temperatures, viscosities and thermal conductivities	19945	Cameron and Hidalgo Counties, Tex	15415
ignition of combustible mixtures by laminar jets of hot gases	19865	Colquitt County, Ga.	2127
industrial, current industrial reports, 1962	18682	Gazarian, Mirhan, relief	8040, 13486
inorganic, current industrial reports	1892, 7757, 1890	Gazetteers, <i>see</i> Geographical names.	
isotopic analysis with 6-inch radius mass spectrometer	9682	GDR, <i>see</i> Germany.	
laminar flow, heat transfer and friction, effect of transverse temperature gradients	15011	Gears, spur, technology for manufacture by rolling, USSR study	12363
low pressure, electron optical studies	16420	Geese:	
NRL thermistor-bridge gas leak detector and its sensitivity to gases, operational performance	3232	Canada goose, recent approaches to management	558
real-gas effects on hypersonic nozzle contours	9160	determining cumulative goose kill on special areas	13977
tables, thermodynamic properties to 6000°K for 210 substances involving first 18 elements	19903	Gehlenite, heat of formation	14516
temperatures in arc-heated jets and tunnels, spectrometric measurements	20987	Gelman, Clayton, measuring and analyzing economic growth	17437
thermal conductivity, pressure effects	18243	Gelatin, current industrial reports	3574
thermal diffusion in porous media, negative concentration effect, USSR study	8539	Geller, Miriam R., treatment of psychiatric disorders with metrazol, bibliography	16517
unsteady diffusion with recombination in ternary mixture of diatomic molecules, dissociated atoms, and inert gas	7278	GEM, <i>see</i> Ground effect machines.	
<i>see also</i> Plasma.		Gemmill, Robert F., new foreign bond issues in U.S. market	12120
Gasification, <i>see</i> Gas.		Gems, <i>see</i> Precious stones.	
Gasoline:		General Accounting Office:	
aviation fuels, petroleum products survey	14504	appropriations, 1964, hearings	18919
motor, petroleum products surveys	5474, 14505	Comptroller General, decisions—	
motorboat, transfer to land and water conservation fund, hearing	15338	B (series)	3533
publication, price list	18280	digests	3602
synthesizing by hot-gas-recycle process, use of large-diameter reactor	3084	index-digest, July 1, 1956-June 30, 1961	4996
world retail prices and taxes, 1962	16348	July 1, 1961-June 30, 1962	19274
		monthly	3532
		electronic data processing equipment use, hearings	15329, 17182
		findings and recommendations for improving Government operations, 1962—	
		departmental edition	8310
		document edition	17070
		opportunities for progress and success in professional accounting	17515
		policy and procedures manual for guidance of Federal agencies	584-585, 4994-95, 10253, 10275-278

# INDEX 1963

Entry	Entry
General Accounting Office—Continued	General Services Administration—Continued
report, 1962—	Federal records management, clarify authority, report,----- 18890
departmental edition----- 6528	general supply fund, GAO audit report----- 8308
document edition----- 6081	GSA supply services to military activities----- 596
General Advisory Committee to Atomic Energy Commission, Panel on High Energy Accelerator Physics, report----- 15016	manganese stockpiling program, GAO review----- 10263
General agreement on tariffs and trade:	negotiated sale of Mitchel Field, hearing----- 8113
articles to be considered for negotiation----- 21117	press releases, news----- 4056
declaration giving effect to provisions of article 16:4----- 9409	public buildings, design and construction program----- 17516
declaration on provisional accession of Argentina----- 1552	report, 1962----- 5011
extending declaration on provisional accessions of Argentina----- 9421	Generators, see names or types of generators.
making trade act work (address)----- 202	Genes, rice, symbolization and linkage group----- 1626
protocol for accession of Israel to agreement----- 11300	Genesis and hardening of laterite in soils----- 1730
protocol for accession of Portugal to agreement----- 9413	Genetics:
sessions of contracting parties, reports----- 4718, 20458	and radiation, use of vital and health statistics----- 1431
tariff conference, 1960-61, analysis of U.S. negotiations----- 11294	cytogenetic study of radium dial painters and progeny----- 13214
trade agreement with—	hereditary information, analysis of structure, USSR study----- 19390
European Economic Community, Japan, and Switzerland----- 18330	microorganisms, USSR study----- 6774
United Arab Republic----- 11326	physiology and genetics, USSR studies----- 15752
trade, interim agreement with Spain----- 11305	protein synthesis, RNA and genetics, relationships, USSR studies----- 17992
trade, protocol of supplementary concessions to agreement with Japan and New Zealand----- 18337	radiation, problems, USSR book----- 4472
United States compensatory concessions, agreement with—	sport fishes, study, hearings----- 4757
Great Britain----- 11304	World Collection of Barleys, evolutionary aspects of certain morphological characters----- 7583
Japan----- 11303	Geneva, Switzerland:
General Assembly of United Nations, see United Nations.	conference on discontinuance of nuclear weapons, guide----- 3341
General aviation accidents, statistical review—	Conference on Peaceful Uses of Outer Space, staff study----- 6204
calendar year 1960----- 7774	International Labor Organization conference—
calendar year 1961----- 11649	House delegates to attend, appoint, report----- 11812
General Counsel, Agriculture Department, appropriations, 1964, hearings----- 9921	U.S. participation, hearings----- 20498
General Counsel of Treasury Department:	test ban negotiations, renewed at Geneva disarmament conference, hearings----- 4777
digest of opinions----- 3600	Genghis Khan, translations from Lishih yen-chiu----- 8641
report for Coast Guard, 1962----- 8134	Geochemistry:
General Dynamics Corporation:	contributions to geochemical prospecting for minerals (series)----- 17521
retention of refunds related to illegally imposed taxes, GAO review----- 8321	contributions to geochemistry (series) -- 8333, 15605, 17525, 19295
TFX contract investigation, hearings----- 10015, 12019, 13809, 15386, 19056	data (series)----- 2349-51, 5024, 6558, 8339
General Electric Co., procurement of aluminum caps and cans without adequate pricing data under AEC contracts, GAO review----- 12211	earth's shells, origin----- 18178
General Grant National Memorial general information----- 1353	exploration, analytical methods used by Geological Survey----- 2343
General Services Administration:	geochemical aspects of artificial recharge at Grand Prairie region, Ark----- 20740
aircraft tires, uneconomical procurement by military services under Federal supply schedules issued, GAO review----- 6539	geochemical prospecting methods at Malachite mine, Jefferson County, Colo----- 17521
appropriations, 1964, hearings----- 18919	Magnet Cove alkaline igneous complex----- 12229
coordination of purchase, etc., of automatic data processing equipment—	tale-bearing ultramafic rocks and adjacent country rocks in north-central Vermont----- 630
hearing----- 11902	Geodesy:
reports----- 13552, 13612	abstracts pertaining to Communist China in Soviet journals----- 12366
excess and surplus personal property utilization and disposal at selected installations, GAO review----- 595	algorithm for solving large systems of normal equations by means of multi-group method on electronic computer, USSR study----- 1085
	application of occultations----- 20649

# JANUARY-DECEMBER

	Entry		Entry
<b>Geodesy—Continued</b>		<b>Geography—Continued</b>	
Coast and Geodetic Survey as central depository of data, hearings	4756	geographic reports, Census Bureau	13302, 20360
datum shifts, derived from camera observations of satellites	12885	Hungary, relationship between vegetation and relief	17830
determining dimensions of reference ellipsoid and geodetic datum on basis of artificial satellite observation, Czechoslovak study	7057	translations from Chung-kuo hsin-wen	14093
Novosibirsk Institute, 30th anniversary, USSR study	19420	see also names of places.	
papers prepared at AFCRL, 1962, compendium	18454	<b>Geography (Chinese periodical) :</b>	
parameters, review	12884	translations	14402, 14404
radiogeodesy in marine geophysical exploration, USSR study	1087	<b>Geological Survey :</b>	
radiogeodetic operations, graphoanalytical method of constructing hyperbolic net, USSR study	6943	bulletins	597-600, 2339-44, 5013-18, 6544-52, 8329-33, 10274-286, 12219-225, 14015-19, 15602-607, 17521-527, 19292-301, 20727-730.
satellite, ANNA-1, optical beacon, evolution	9617	title page and contents, no. 1096	10277
side computation in electronic geodetic triangulation by circular surveying system, Polish study	7004	circulares	12226-227, 19302-307
U.S. and in other areas, operations through international cooperation, 1960-62	13332	geochemical exploration, analytical methods used	2343
<b>Geodetic surveying, see Maps and charts.</b>		geologists, examination announcement	16955
<b>Geofizicheskaya razvedka (periodical) :</b>		professional papers	601-608, 2345-51, 5019-24, 6553-60, 8334-39, 10287-293, 12228-230, 14020-26, 15608-614, 17528-529, 19307-319, 20732-737.
translations	5294	publications—	
<b>Geographic bulletins</b>	13068, 16574	monthly list	3960
<b>Geographic Names Board :</b>		1962	20738
decision lists	5012, 12218	releases	4057
gazetteers	2337, 10273, 17517-519, 19289-291	reports and maps released only in open files, 1962, list	19302
<b>Geographic reports, Census Bureau</b>	7765, 13302, 20360	research 1962 (series)	608, 6539
<b>Geographical atlases, see Atlases.</b>		research 1963, geology and hydrology—	
<b>Geographical names :</b>		papers	14026
Belgium	17518	short papers	20737
Brazil	17517	water supply papers	609-614, 2352-57, 5025-38, 6561-69, 8340-57, 10295-301, 12231-236, 14028-37, 15615-620, 17530-535, 19321-335, 20739-744.
Cambodia	17519	<b>Geologists :</b>	
Ch'i-lieu Mountains, geological gazetteers, Communist Chinese study	14104	examination announcements	16955
Cuba	19289	amendment	183
decision lists	5012, 12218	<b>Geology :</b>	
gazetteers	2337, 10273, 17517-519, 19289-291	abstracts pertaining to Communist China in Soviet journal	753, 847, 12362, 14405, 17620
Laos	2337	Agua Caliente Spring, Palm Springs, Calif.	8346
Mainland China	10273	American Falls quadrangle, Idaho	10280
North Korea	19291	and thorium-bearing deposits of Lemhi Pass area, Idaho-Montana	6548
Sweden	19290	and uranium deposits in southern Black Hills (series)	6544, 10275
<b>Geography :</b>		Angostura Reservoir quadrangle, S. Dak.	6544
abstracts pertaining to Communist China in Soviet journals	847, 8848, 12366, 12544, 14405, 15995, 17620.	Anlauf and Drain quadrangles, Oreg.	5015
Acta geographica Sinica (Chinese periodical), translations	16084	Aral Sea, geomorphological characteristics, USSR study	702
aerial photography, use for study of terrain, USSR study	12514	Arctic regions and Siberia, USSR studies	19650
agricultural geography of China	2719	area south of Telluride, Colo.	6546
Communist China :		areal, and aeroradioactivity survey of—	
Hunan Province gazetteer	916	Georgia nuclear laboratory area, northern Georgia	11552
regional economics, articles from Ti-li (periodical)	14274	Oak Ridge National Laboratory area, Tenn. and Ky.	1827
translations	8694	Bannock thrust zone, southeastern Idaho	8336
translations from Acta geographica Sinica	10502, 10592	<b>Baranof and southern Chichagof Islands, geologic mapping, stratigraphic and structural study (series)</b>	10284
translations from Ti-li	15753, 15815, 16085, 20916	Bartow County, Ga.	19326
Communist Chinese periodical, articles	10738	Basin quadrangle, Mont.	20729
economic—		bedrock	
for communes, Communist China	6864	Coventry Center quadrangle, R.I.	19298
French Indochinese military territory, French study	17609	Crompton quadrangle, R.I.	19299
geographic bulletins	13068, 16574	Kassler quadrangle, Colo.	14025

# INDEX 1963

	Entry
Geology—Continued	
Belmont County, Ohio.....	19314
beryllium deposits in Thomas Range, Juab County, Utah.....	10286
Bexar County, Tex.....	14029
Brookhaven National Laboratory and vicinity.....	14018
Burdock quadrangle, S. Dak.....	10275
Cachoeira do Campo, Dom Bosco, and Ouro Branco quadrangles, Minas Gerais, Brazil.....	602
Calamity Peak area.....	5018
Capitol Reef area, Wayne and Garfield Counties, Utah.....	20732
Carolina slate belt.....	15602
Cenozoic, part of area inundated by late Pleistocene lake.....	2345
Ch'i-l'en Mountains, gazetteer.....	14104.
China.....	14279
China.....	12299
China geology (periodical) translations.....	15944
Clark Fork quadrangle, Idaho-Mont.....	17523
Clifton quadrangle, Wyo. and S. Dak.....	20727
coal, Seltz quadrangle, Ky.....	598
Communist China, translations from geological review.....	10614
contributions to economic geology (series).....	598.
5013, 5015-16, 5018, 6546, 6550-52, 10285-286, 14019, 15602-604, 15607, 17524, 17527, 19292, 19300, 20730.	
contributions to general geology (series).....	2339.
2342, 2344, 6547, 6549, 8330-32, 10278-280, 10284, 12221, 12225, 17523, 19294, 19301, 19317, 20728.	
contributions to geology of Antarctica (series).....	19318
contributions to geology of uranium (series).....	19296
Cook Inlet area, Alaska, aeromagnetic reconnaissance.....	6553
Cuyuna North range, Minn.....	20734
Darwin quadrangle, Inyo County, Calif.....	2347
deep drilling as method of studying earth's crust, USSR study.....	14280
Deer Flat area, Utah.....	12223
denudation and orogeny, disparity between present rates.....	15614
Dingus area, Ky. (series).....	10274
Dougherty County, Ga.....	12232
Dubuque North quadrangle.....	10281
Duck Creek Pass quadrangle, Mont. economic.....	12221
Alaska, contributions to.....	19297
Central City district, Colo.....	19311
Chicoza quadrangle, Fla.....	20730
Keyeville quadrangle, Fla.....	10282
Edgemont NE quadrangle, Fall River and Custer Counties, S. Dak.....	12219
Edwards County, Tex., ground-water.....	12235
effects of high-explosive tests in USGS tunnel area, Nevada test site.....	5021
Elizabethhton-Johnson City area, Tenn.....	5025
Elk River, Minn., nuclear-reactor site.....	14016
engineering, SCS handbook.....	20139
Ewing quadrangle, Ky.-Va.....	6551
Fairfax quadrangle, Va.....	609
Fort Laramie area, Wyo.....	19294
Fourmile quadrangle, Black Hills, S. Dak.....	14020
Freshwater Bay area, Chichagof Island, Alaska.....	6545

	Entry
Geology—Continued	
Funeral Peak quadrangle, Calif., on east flank of Death Valley.....	14024
geologic investigations related to nuclear explosions (series)....	5021, 19315
geological prospecting methods at Malachite mine, Jefferson County, Colo.....	17521
Geological Survey research, 1963, short papers.....	14026, 20737
geology and hydrology of Guam, Mariana Islands (series).....	19316
geology and uranium deposits in southern Black Hills (series)....	12219, 20727
geomorphology of Front Range, Colo.....	10290
Gila Bend Indian Reservation, Maricopa County, Ariz.....	6507
Glenwood Springs quadrangle, Colo.....	17524
Grayson County, Tex.....	10300
Greybull River-Dry Creek area, Wyo.....	8345
ground-water—	
Bunker Hill Air Force Base and vicinity, Peru, Ind.....	19323
Frenchman Creek basin.....	15615
Guam, Mariana Islands (series)....	19289, 15611
Haldeman and Wrigley quadrangles, Ky.....	5016
Hale County, Tex.....	6563
Hallam Nuclear Power Facility site.....	2341
Hamme tungsten district, N.C. and Va.....	15602
Hays County, Tex.....	14030
Hualapai Indian Reservation.....	5033
Itabira district, Minas Gerais, Brazil.....	15609
Jackson Mountains, Humboldt County, Nev.....	12225
Karnes County, Tex., ground water.....	8340
Kassir quadrangle, Jefferson and Douglas Counties, Colo. (series).....	10290, 14025
Lake Dakota plain area, South Dakota.....	8342
Lake Mead and Davis Dam, reconnaissance of area between.....	15610
Leighton, Pa., quadrangle.....	19293
Los Angeles region, Calif., related to aeroradio-activity survey.....	5027
Lyman-Mountain View area, Wyo.....	20744
major principles for general education, evaluation list.....	4826
Maple and Hovey Mountains area, Arcoosook County, Maine.....	6554
Maynard, Mass., ground-water of area.....	2354
metamorphism in Riggins region, western Idaho.....	20735
Minas Gerais, Brazil (series)....	601-602, 15609
Monument Valley area, Ariz.....	12220
Mount Fairweather quadrangle, Glacier Bay, Alaska.....	6547
Mount Pinchot quadrangle, southern Sierra Nevada, Calif.....	10283
Nash Draw quadrangle, N. Mex.....	6549
Nefsy Divide quadrangle, Crook County, Wyo.....	8330
Newcastle area, Weston County, Wyo.....	20728
northern part of Tenmile Range, Summit County, Colo.....	19300
Nova Lima and Rio Acima quadrangles, Minas Gerais, Brazil.....	601



# JANUARY-DECEMBER

Geology—Continued	Entry	Geology—Continued	Entry
phosphate deposits of northern Florida	8329	Willow Springs and Rosamond quadrangles, Calif.	10276
Pinal Ranch quadrangle, Ariz.	15003	Winkler County, Tex.	5034
Pinto Basin, Joshua Tree National Monument, Calif., reconnaissance	5028	see also Cenozoic era—Earth—Ordovician period—Pre-Cambrian period—Stratigraphy.	
Platteville quadrangle, Wis.	17522	Geomagnetism, see Terrestrial magnetism.	
Point Arguello Naval Missile Facility	6565	Geomagnetism and aeronomy (USSR periodical):	
Portland, Oreg., and adjacent areas	14015	translations	10770
publications, price list	9332	Geomagnetism i aeronomiya (periodical):	
quaternary and geomorphic history of Kassler quadrangle, Colo.	10290	translations	10770
railroad mining district, Elko County, Nev.	17527	Geometry:	
Red Devil Quicksilver Mine, Alaska—research, 1962—	15604	hydrologic, Thailand, ground mobility	13888
short papers	6559	planetary, papers prepared at AFRL, 1962, compendium	18454
synopsis of results	608	surface, Thailand, ground mobility	13888
Rocky Mountain, head of Missouri River	12228	tubes, detonation of waves with variable geometry tubes	12887
St. Lawrence County magnetite district, northwest Adirondacks, N.Y.	2348	see also Microgeometry.	
Salersville North quadrangle, Ky.	10274	Geomorphology, see Geology.	
San Gabriel Mountains	18102	Geophysical Year, 1954–58, see International Geophysical Year, 1957–58.	
San Nicolas Island, Calif.	14021	Geophysics:	
Santa Fe area, N. Mex.	19321	abstracts pertaining to Communist China in Soviet Journals	12733,
scientific notes and summaries of investigations	6559	17620, 17740, 17766, 17977	
Scottsville area, Ky.	10296	Air Force surveys in geophysics	1749–50,
seismic and gravity surveys of Naval Petroleum Reserve No. 4 and adjoining areas, Alaska	5020	4390	
selected quadrangles in Rhode Island (series)	10298–299	Atlantic Ocean and modern geophysics, USSR study	14298
shorter contributions to general geology (series)	606,	China, conference on neotectonics, USSR report	14217
5022, 6555, 6560, 8336,	15610,	experimental and theoretical geophysics (series)	597
15613–614, 17529, 20736.		exploration, Santa Fe area, N. Mex.	19321
South Silverton mining area, Colo.	8337	Explorer satellites	3109
title page and contents	10287	field investigations (series)	2346,
southern Cache Valley, Utah	2345	6553	
southern Nassau and southeastern Queens Counties, Long Island, N.Y.	12234	geophysical abstracts	3754
southern Utah Valley, Utah	5019	geophysical exploration (USSR periodical), translations	5294
Southold, N.Y.	20742	geophysical prospecting methods at Malachite mine, Jefferson County, Colo.	17521
Strawberry Hill quadrangle, Wyo.	2340	Hungary, 8th symposium	15685
structure of earth's crust in zone of transition from Asian continent to Pacific Ocean, USSR study	12657	instrumentation for research	59,
subsurface, Eniwetok Atoll	19308	5877, 7618, 9616–17,	18490
superdeep, drilling problems for study of structure of earth's crust in Azerbaijan, USSR study	12354	marine exploration, USSR report	6866
surficial, Elmira-Williamsport region, N.Y. and Pa.	19313	news of Academy of Sciences, USSR, translations	2535
Three Forks quadrangle, Montana	12228	research in space exploration, papers	5541
Tremont quadrangle, Pa., rocks of Pennsylvanian age	5013	seismic and gravity surveys of Naval Petroleum Reserve No. 4 and adjoining areas, Alaska	5020
Turtle Lake quadrangle, Wash.	12222	Siberia and Far East, USSR research	12353
Twin Crags quadrangle, Idaho	6550	Soviet and Chinese articles, English abstracts	3627
two layered gabbro stocks in Fairweather Range	10279	Soviet bloc research	4200
underwater, USSR studies	14310	USSR—	
upper Missisquoi Valley and vicinity, Vt.	19292	atmospheric observations during IGY	12365
USSR investigations, improving organization	14141	Main Geophysical Observatory, report	10397
USSR, sciences, development, present and future	7040	recent developments	10520
Valle Grande and Valle Toledo, Sandoval County, N. Mex.	19325	research, 1962	8760
volcanic rocks of Truk Islands	8338	George G. Meade, Fort, see Meade, George G., Fort.	
water power sites, Trask River basin, Oreg.	17531	George Washington Carver National Monument, general information	19977
watershed, relationship to beach radioactivity	19132	George Washington Memorial Parkway, administer Great Falls property in Virginia, report	13726

# INDEX 1963

Entry	Entry
Georges Bank, haddock landings, length and age frequency samples collected-----	8282-83
Georgia:	
annual survey of manufacturers, 1961, standard metropolitan statistical areas, and large industrial counties, statistics-----	4568
climatological data-----	3517
coastal areas, hurricane survey, engineer report-----	
departmental edition-----	6361
document edition-----	6085
county business patterns, activities covered by OASDI program-----	15052
5B redevelopment area, statistical profiles-----	13360, 13361
landings, fishery products-----	3755
legal status of women-----	20253
management of small woodland holdings in Piedmont area, 12 year report-----	10247
mineral industry, minerals year-book chapter-----	20955
northern, aeroradioactivity survey and areal geology of nuclear laboratory area-----	11552
peaches, marketing, 1962 season-----	13552
Piedmont upland, roadbank erosion and its control-----	20262
population, 1960, characteristics-----	15042
precipitation data, hourly-----	3771
timber-----	19272
women, legal status-----	13133
women workers, 1960-----	5773
ZIP code directory-----	20034
Geothermal energy, steam deposits, issuance of leases, hearing-----	19059
Gergen, John A., stereotaxic atlas of squirrel monkey's brain-----	7318
Geriatrics, problems of gerontology and geriatrics (USSR periodical), translations-----	6947
Gerleke, Otto R., point-contact transducers for ultrasonic testing-----	12965
Gerken, J. M., welding columbium alloys-----	5850
Germanium:	
doped with gold and zinc, photoelectric properties, USSR study-----	7037
linear dislocations, recombination, study-----	5234
silicon-germanium thermoelectric modules for Transportation Corps silent boat design, optimization-----	16633
Germany:	
Belgium boundary, study-----	20152
customs valuation under revised German law, 1962-----	5067
Democratic Republic, <i>see</i> , below, Soviet Zone.	
East, <i>see</i> , below, Soviet Zone.	
Federal Republic-----	
assistance for foreign students, especially from Asia, African, and Latin America-----	5365
DeGaulle-Adenauer pact-----	7129
domestic agricultural assistance program, evaluation-----	15421
economic developments, 1962-----	8396
economic statistics, handbook-----	3761
educational data-----	8164
federal association of German aerospace industry, proceedings-----	7107
foreign trade 1960-61-----	5085
gas appliances, household and commercial, U.S. market-----	7736
Germany--Continued	
goals for Atlantic community, address by President Kennedy-----	14934
lease air service equipment, agreement-----	21125
livestock and meat industry-----	6478
loan of vessel, extension, agreement-----	1549
maritime matters, use of territorial waters and ports by N.S. Savannah, agreement-----	5736
ornamental plant explorations-----	11432
outdoor recreation survey-----	1380
preparing shipments to-----	5072
press items on international Communist movement-----	10378
press service news briefs from East Berlin-----	10367
science, organization of training, research, etc-----	16445
sending gift packages to-----	2408
settlement of claims against members of U.S. Armed Forces insured by Brandaris Insurance Co., agreement-----	13079
status of forces, agreement-----	16577
steel wire rods, determination of no injury or likelihood thereof to U.S. industry-----	13096
test ban treaty acceptance, German article-----	17782
U.S. forces, status, agreements-----	16578
foreign policy documents-----	3339
Soviet Zone-----	
air defense against chemical and biological weapons, instruction material-----	705
civil aviation law of July 31, 1963-----	17714
constitution-----	12738
Council for Planning and Coordination of Medical Science at Ministry of Public Health, order concerning-----	12308
cybernetics significance in science-----	
technology and economy-----	7085
technology and industry-----	5343, 10506
East European legal journals, abstracts-----	12345, 12556, 16075, 16088, 17867, 20867, 20806
East German youth law draft-----	20806
economic plan, 1964, State Council decree-----	20820
economic planning, etc., new system, guidelines-----	16097
economic system, result of party work, translation-----	15758
economic-technical information-----	7058
electrochemical research-----	7035
legal journals, abstracts-----	606, 6897, 7076, 8528, 8575, 8812, 8819, 8854, 10808, 14337, 20904
nuclear research and technology-----	7118
sending gift packages to-----	2408
Socialist People's Party, program for 6th Congress-----	981, 5108
students in Ukraine-----	17938
Ulbricht report to 6th SED Congress-----	5216
Ulbricht's terror justice, trial of Harry Seidel-----	5129
use of radar technology in meteorology-----	965
Third Reich, 1st phase, foreign policy documents-----	3339
West, <i>see</i> , above, Federal Republic.	
Germicides, <i>see</i> Antiseptics.	
Germination:	
black cherry seed, effect of pre-germination treatment-----	17498
shortleaf pine seed, treated-----	15576

# JANUARY-DECEMBER

	Entry		Entry
Gerontology:		Gifts—Continued	
basic reference books and journals.....	20248	sending packages to—continued	
highlights of legislation on aging.....	9508-9,	New Zealand.....	2411
	11410	Norway.....	2412
problems of gerontology and geri-		Paraguay.....	2413
atrics (USSR periodical),		Sierra Leone.....	2414
translations.....	6947	Sweden.....	2415
social, future of research.....	18368	Switzerland.....	2416
Gertler, Diane B.:		United Arab Republic (Egypt).....	2417
offerings and enrollments in grades		Gigiyena i sanitariya (periodical):	
9-12 of nonpublic secondary		translations.....	835, 2574, 5141, 8851, 10768
schools.....	15438	Gila Bend Indian Reservation, geology	
statistics of nonpublic secondary		and ground water conditions.....	6567
schools, 1960-61, type of		Gila County, Ariz., mining methods	
school, enrollment, and staff.....	15448	and costs, Inspiration Consoli-	
Gertsma, L. W., inlets designed for		dated Copper Co., open-pit	
inlet-engine matching up to		mine.....	7210
Mach 3, performance at Mach		Gila River:	
nos. 3.07, 1.89 and 0.....	16355	Camelsback Reservoir flood control,	
Gervin, Leon M., relief.....	1172, 18770, 18992	engineer report—	
Gesneriaceae, <i>see</i> Trichantha.		departmental edition.....	2197
Gessner, Anne L., statistics of farmer		document edition.....	2070
cooperatives, 1960-61.....	15461	flood control, engineer report—	
GETOL (ground effect take-off and		departmental edition.....	412
landing), <i>see</i> Aircraft.		document edition.....	313
Gettysburg, Battle of, 5-cent commem-		water supply outlook and snow	
orative stamp (poster).....	14642	surveys.....	4284
Gettysburg Address Centennial Day,		Gila River and Valley:	
proclaim Nov. 19, 1963, report.....	18891	headwater springs in drainage	
Ghana:		basin—	
economy, basic data.....	2391	quality of water.....	8347
fact sheet.....	16567	reconnaissance.....	8347
fisheries survey.....	19236	Gilbert, Irwin H., effect of insect	
is U.S. money aiding another Com-		repellents on plastics, paints,	
munist state?, hearing.....	10340	and fabrics.....	1623
preparing shipments to.....	16340	Gilbert, L. O., organic coating using	
scientific institutions, USSR study.....	20866	fluidized bed technique.....	20014
GI loans, <i>see</i> Loans.		Giles, Robert E., remarks, Mar. 2,	
Giant sequoias, <i>see</i> Sequoias.		1963.....	6052
Glazikis, Anthony H., relief.....	13477, 16990, 17233	Gilkey, M. M., water requirements	
Gibbs, Carter B., field trial of tree		and uses in Arizona mineral in-	
injector in weeding in West		dustries.....	12824
Virginia.....	20701	Gill nets, <i>see</i> Fish nets.	
Gibbs, Katye M., explosive forming,		Gilman, Merritt, training for juve-	
ASTIA report bibliography.....	4438	nile probation officers.....	174
Gibson, Burdett, mining machinery		Gilmore, J. E., screening tests of or-	
and equipment, shipments and		ganic insecticides against Cali-	
related data, 1955-61.....	1863	fornia red scale.....	18394
Gibson, F. C., electrical method for		Gilmore, Volt:	
measurement of propagation		address, Jan. 11, 1963.....	5762
velocities in explosives, etc.....	9133	excerpts from statement, Apr. 30,	
Gibson, J. E., brightness temperature		1963.....	11366
of Venus.....	18252	Gilpin County, Colo., economic geology	
Gibson, Kenneth E., beet leafhopper		of Central City district.....	19311
control in southern Idaho by seed-		Gingivitis, screening examination for	
ing breeding areas to range		detection of gingival and peri-	
grass.....	9540	odontal breakdown and local	
Giesler, Harold W., low-power tests		irritants.....	18503
of Plum Brook reactor.....	7258	Gingrich, Samuel F., adjusting short-	
Gifford, Chloe, woman's viewpoint		leaf pine volume tables for dif-	
concerning air pollution.....	3300	ferent limits of top utiliza-	
Gift tax, <i>see</i> Inheritance and trans-		tion.....	567
fer tax.		Ginn, John L., prepackaging Alabama	
Gifts:		and Florida potatoes at produc-	
businessmen, income tax deduction,		tion points.....	4358
questions and answers.....	15643	Ginning, <i>see</i> Cotton gins and ginning.	
expenses, 1962 rules for deducting,		Ginocchio, Stephen, development of	
and new 1963 recordkeeping		orally effective insect repellent.....	14950
rules for substantiation.....	6584	Girders, bridge girder assembly by	
sending packages to—		high strength screw bolt	
Berlin.....	2408	method, Communist Chinese	
Bolivia.....	2401	study.....	10489
Cameroon.....	2402	Girdling, methods and costs of killing	
Canada.....	2403	hardwood culls.....	8291
Congo (Leopoldville).....	2404	Girdner, Charles L., Jr., soil survey	
Costa Rica.....	2405	of Bailey County, Tex.....	13057
Federation of Rhodesia and		Girl Scouts of America, 50th Anni-	
Nyasaland.....	2406	versary, report 1962.....	13456
France.....	2407	Girls:	
Germany.....	2408	delinquent, foster home care.....	1924
Greece.....	2409	status and activities in labor mar-	
Mexico.....	2410	ket today and tomorrow (ad-	
		dress).....	14807

# INDEX 1963

	Entry		Entry
Girroux, Richard W. textual records of Panama Canal.....	9200	Glenn, Dean C. minimum-oil-flow requirements of high-speed ball bearings at temperatures to 800° F.....	20993
Giving food demonstration with tips for TV, guide for extension workers.....	5837	Glenview, Ill., population, special census.....	15076
Glacial period, Ice Age National Scientific Reserve, Wis., establish, proposal.....	9240	Glenwood Springs quadrangle, geology.....	17524
Glacier Bay, Alaska, geology of Mount Fairweather quadrangle.....	6547	Glick, Marvin: occupational wage survey—	
Glacier National Park, general information.....	7332	Green Bay, Wis.....	1173
Glaciers:		Indianapolis, Ind.....	7163
electrical D-C resistivity measurements on glacier ice near Thule, Greenland.....	4843	Kansas City, Mo.-Kans.....	7163
polar, dry snow densification theory.....	6362	Milwaukee, Wis., Apr. 1963.....	14466
Glands, <i>see</i> Adrenal glands.		Omaha, Nebr.-Iowa.....	5440
Glaser, Peter E., materials for vacuum insulation.....	11472	South Bend, Ind.....	12799
Glass, Andrew C., statistical summary of water facilities in United States, Jan. 1, 1958.....	18293	Glide path systems, maintenance of ILS glide slope equipment, handbook.....	20659
Glass:		Gliders (aircraft):	
crystal materials made from slag, USSR study.....	655	blunted reentry configuration, static longitudinal stability characteristics.....	11000
cylinder, crown, and sheet, Tariff Commission report.....	20198	delta boost-glide configuration, free-flight investigation at supersonic speeds of stability and drag.....	18132
fibrous glass, 1962, current industrial reports.....	18681	manned, unpowered, flight evaluation, preliminary.....	9188
flat, current industrial reports.....	3575, 4582	paragliders flexible-canopy, aerodynamic characteristics.....	11056
manufacturing, classification bulletin.....	1381	parawing towed model, dynamic stability, investigation.....	7271
properties at elevated temperatures.....	9636	Glock, Waldo S., uniformity among growth layers in <i>3 ponderosa pine</i> .....	5721
sheet, determination of no injury to U.S. industry, Czechoslovakia.....	1568	Gloria, Hermilo R., initial weight loss of plastics in vacuum at temperatures from 80° to 500° F.....	1273
shields of re-entering ICBM, heating and melting process at stagnation point.....	11037	Glossaries:	
<i>see also</i> Glass fibers— <i>also</i> names of manufactured articles and materials.		abbreviations and terms used in Indonesian press.....	20775
Glass fibers:		aerospace age terms.....	13208
fiberglass building materials, USSR study.....	8739	automatic data processing.....	5956
fuel bearing fiberglass in aluminum-base fuel elements, fabrication properties, report.....	4492	Latin American press abbreviations.....	12696
glass plastics, USSR study.....	10591	ordnance technical terminology.....	12962
physicochemical properties, USSR study.....	10823	programming, for NAREC users.....	11155
plastics, glass fiber reinforced, USSR study.....	12479	Russian-English, motor-transport, etc., terms.....	12690
vinyl-coated insect screening and louver cloth, standard of trade.....	4513	Glossosomatidae, <i>see</i> Caddis flies.	
Glassman, Arthur J., turboelectric space power systems, alkali metal, effect on turbine geometry.....	11047	Gloves:	
Glassware, pressed and blown, current industrial reports.....	20356	current industrial reports, 1962.....	11623
<i>see also</i> names of articles manufactured from glass.		winter flying handwear, experimental design.....	11505
Glaucoma:		Glucose, one-hour oral tolerance test.....	16537
and its effect on eyesight.....	11233	Glue:	
test of eyes, protective assurance of vision.....	11240	animal—	
Glawe, George E., steady-stage, stagnation-point, heat-transfer-rate measuring device.....	11045	current industrial reports.....	3574
Gleeson, Geraldine A., disability days due to injury, United States, July 1959-June 1961.....	5687	summary, 1962, current industrial reports.....	7751
Glen Canyon Dam, general information.....	16546	Glutaraldehyde, quantitative analytical procedure for determining in tanning solutions.....	7547
Glenbrook (steamship):		Glycine:	
United States-flag commercial vessel under cargo preference law, hearings.....	2087	revision of genus and immediate allies.....	1729
		erratum.....	16765
		Glycogen, blood, in mammals after single whole-body X-irradiation, cytochemistry, USSR study.....	8838
		Glycol, <i>see</i> Polyethylene glycol.	
		Glycoproteins, ovomucoid and catalase mixed films, force-area study.....	12956
		Glyptagnostus and associated trilobites in United States.....	606
		Gnoseology, pragmatism and semiotics, Charles W. Morris' theory, USSR study.....	10471
		Goals for Atlantic community.....	14934

# JANUARY-DECEMBER

	Entry		Entry
Goatfish, development and distribution of larval and juvenile fishes of western North Atlantic	2287	Goldstein, Leon G., accident prevention research, what it takes, who can do it	20090
Gochev, Petur V., biographic information, Bulgarian study	7101	Goldstein, Philip: occupational wage survey—Paterson-Clifton-Passaic, N.J., May 1963	16287
Goddard Space Flight Center: contributions to COSPAR meeting, May 1962	12855	Washington, D.C.-Md.-Va.	5443
earth satellites, thermal-vacuum testing	16372	Goldy, Daniel L.: addresses, etc.—	200
5th anniversary of international tracking of space vehicles	5507	Nov. 13, 1962	9778
general information	9140	Apr. 27, 1963	9776
overpayment of rentals for automatic data processing machines, GAO review	12209	Apr. 30, 1963	9780
Godfrey, Horace D.: address, Dec. 2, 1962	1666	May 10, 1963	11683
remarks, Oct. 25, 1962	1667	May 24, 1963	13476
Godman, R. M.: influence of regular spacing on growth of red pine plantation	15564	Goleniewski, Michal, relief	17005, 17231
red pine cone production stimulated by heavy thinning	578	Golgi apparatus: neuronal—	
Goebel, Wallace B., preliminary inventory of records of National Bituminous Coal Commission	14597	alterations identified by nucleoside diphosphatase activity	7195
Goeddel, Walter V., preparation of (Th,U)C <sub>2</sub> fuel particles for HTGR	14961	cytochemical study in experimental diphtheritis encephalitis in rats	7193
Goedertler, P. V., volume recombination of cesium ions	7482	Golley, Frank B., bibliography of mice of genus <i>Microtus</i>	11584
Goggin, Daniel T., general records of Department of State	18183	Golub, Alvin, occupational wage survey, Pittsburgh, Pa.	12792
Gold, Ruth Z., comparing multinomial probabilities	68	Gomel, USSR, general information	2840
Gold: electrodes, hydrogen overvoltage, research	11473	Gomulka, Wladyslaw, Gomulka's Poland, reaction to Witold Jedlicki's article Churils and kikes, author's glossary	8807
mine production report, monthly	3756	Gonella, Luigi: injections of electrons into annular machines—	
minerals yearbook chapter	19833	dynamics of injected beam and central-shift capture-mechanism	5936
mining on Chukotka, USSR industrial development	8711	experimental results	7699
production and consumption report, 1961	10968	Gongola, Victor J., dilute solution properties of poly(n-octyl methacrylate)	7378
production incentives, hearings, appendix	2095	Gonococcus, procedures for isolation and identification	1405
radioactive, treatment of brain tumors, USSR study	19388	Gonon, J. P., bibliography of human factors research	18487
regulations	21147	Good, Robert C., Africa's unfinished struggle for freedom, real issues	7432
used to dope germanium, photoelectric properties	7037	Goode, Henry P., sampling procedures and tables for life and reliability testing based on Weibull distribution	8142
Gold (money): gold and dollar reserves—		Gooding, R. M., production of mineral fuels and hydropower in U.S. since 1800	7211
foreign	12053	Goodlett, John C., forest regions and great soil groups, Elmira-Williamsport region, N.Y. and Pa.	19313
foreign holdings abroad continue to rise 1st half 1962	2139	Goodman, M. W., syndrome of decompression sickness in historical perspective	7191
Mint Bureau report, 1962	10968	Goodsell, Wylie D.: costs and returns, western livestock ranches, 1962	15412
U.S. stock, etc.	2277	farm costs and returns, commercial farms by type, size, and location	16731
United States movements	4268	Goodwin, Robert C.: addresses, etc.—	
Gold star lapel buttons, see Lapel buttons		July 3, 1963	13875
Goldberg, Arthur J., address, Mar. 4, 1963	7133	Sept. 4, 1963	17405
Goldberg, Theodore J.: center-line pressure distributions of 2-dimensional bodies with leading-edge angles, etc.	14556	Sept. 30, 1963	19122
effects of rounding corners and leading edges on windward-surface pressures of delta wing swept 65°, etc.	14589	Goodwin, Robert D., comparison of 2 melting-pressure equations constrained to triple point using data for 11 gases and 3 metals	21028
Goldenthal, A. J., future of travel in U.S.	3250	Goose, see Geese.	
Goldsborough, George H., seed flax straw, potential for extending its utilization	11431	Gordon, Donald T.: fuel-break in ponderosa-Jeffrey pine type	8297
Goldstein, Arthur W., sheath near plane electrode bounding collisionless plasma in magnetic field	19936	growth response of east side pine poles to removal of low vegetation	12163
Goldstein, Harold, economic setting for vocational guidance	20931		



# INDEX 1963

Entry	Entry
Gordon, Sanford, IBM 704 or 7090 program for computation of chemical equilibrium compositions, rocket performance, etc.-----	19909
Gordon, Vivian V., publications of Education and Labor Committee, House, selected bibliography-----	11894
Gordon, W. B., error analysis of naval space surveillance system-----	18229
Gordon, William G.: Great Lakes trawler conversion-----	4957
trawling survey of southern Lake Michigan-----	13959
Gore, Lillian L., what is a good nursery school-----	20646
Gorfain, Abel, and wife, relief-----	7893
Gorgas Memorial Laboratory: audit report, 1962-----	4707
report, 1962-----	4707
Goshen, Edward E.: remarks-----	
Feb. 19, 1963-----	4429
Feb. 26, 1963-----	5902
Apr. 6, 1963-----	7653
Aug. 5, 1963-----	14931
Goshen County, Wyo., Fort Laramie area, geology-----	19294
Gossett, F. R., geodetic operations in U.S. and in other areas through international cooperation, 1960-62-----	13332
Gossett, William T., nomination hearing-----	4776
Gott, Garland B., geology of Edgemont NE quadrangle, S. Dak-----	12210
Gouck, H. K., compounds affecting development of house fly larvae-----	16711
Government: American Federal system, improve effectiveness, role of Advisory Commission on Intergovernmental Relations-----	1, 18373
books on many subjects-----	7391
census, 1962-----	
announcement and order forms-----	5986, 15032
final reports-----	5990, 5035, 16878, 20342
governmental organization-----	5990
preliminary reports-----	152-154, 5991
publication program, list-----	18698
taxable property values-----	15035
topical studies-----	18642
announcement and order form-----	20341
Census Bureau recurrent reports scheduled, 1964-----	15034
census publications, price list-----	9334
city finances in 1962, compendium-----	16888
competition with private enterprise-----	13807
English and government, Federal textbook-----	14043-45, 15628, 17542, 19343
Federal-- and education-----	18810
print additional copies, report-----	15235
print as House document, reports-----	17127, 17290
cost reduction through better management-----	7723
education directory, 1962-63-----	15427
electronic data processing equipment, financial advantages of purchasing over leasing, GAO study-----	6542
electronic data processing equipment use-----	
inventory-----	20503
report-----	18912
Government--Continued Federal--Continued office automation-----	14479
organization for scientific activities, 1962-----	7342
role in control of air pollution-----	1426
role in metropolitan areas, hearings-----	6300, 19053
role in providing medical care to citizens of U.S.-----	17195
State, and local public employee credit transferability among Government units, commission report-----	9524
government finances in United States, 1962-----	16901, 20361
information plans and policies, hearings-----	13650, 17169
intergovernmental responsibilities for water and sewage disposal in metropolitan areas-----	4327
Italian Communist views-----	2946
local-- financing, 1960's, past trends and future prospects (paper)-----	7526
State constitutional and statutory restrictions upon structural, functional, and personnel powers-----	4329
metropolitan areas, legal problems of planning-----	3292
new frontiers in business relationships (address)-----	18751
operations, improving, GAO findings and recommendations, 1962-- departmental edition-----	8310
document edition-----	17070
our American Government, questions and answers-----	9955
our Constitution and Government, Federal textbooks-----	621, 15629-630, 17543
partnership, people and government (address)-----	1716
patent policies, economic aspects, hearings-----	12028
publications, list-----	20086
State and local-- continuity in emergency-----	4826
finances, State reports-----	16878
finances, summary, 1962-----	7767
government special studies-----	15079
long-term debt-----	154
occupational health services for employees, guide-----	18287
regulation of drugs and related products, report-----	13569
revenues and expenditures in Great Plains-----	4802
tax revenue, 1962-----	15079
tax revenue, Jan.-Mar. 1963-----	16903
tax revenue, Apr.-June 1963-----	20362
States, education directory, 1962-63-----	2155
statistical programs, Federal-State cooperative-----	16292
transfer of information, responsibilities of technical community and Government-----	5677
units in 1962, census-----	153
see also Intergovernmental relations--United States--also headings beginning Government.	
Government buildings, see Public buildings.	
Government contracts: architect-engineer contracts with Defense Dept., how to obtain consideration-----	6313
Army prime contracts, monthly listing-----	3593
Atomic Energy Commission, bidder mailing list, application form-----	13252

# JANUARY-DECEMBER

	Entry
Government contracts—Continued	
code of Federal regulations.....	6418
conservation reserve, release of land.....	13839
construction contracts, etc.....	13252
Davis-Bacon act.....	
administration, hearings and appendix.....	4753
amendments.....	
hearings.....	11892
report.....	11796
Defense Dept. and National Aeronautics and Space Administration contractors, relocation costs incurred for recruiting salaried personnel, etc., GAO review.....	6537
Defense Dept., with Martin Marietta Corporation, GAO report.....	19280
Education Office, cooperative research program, application instructions.....	15424
engineer contract instructions.....	2217
equal employment opportunity—goal of President's Committee on Equal Employment Opportunity.....	12973
rules and regulations of President's Committee on Equal Employment Opportunity.....	3259, 14648, 20079
Grand Valley Water Users' Association, repayment contract, modify—	
law.....	13417
report.....	6153
guide for businessmen doing business with Federal Government.....	531, 8326
housing, etc., for employees of contractors, extend authority—	
law.....	18774
report.....	17285
independent nonprofit Federal research contractors.....	6205
International Development Agency, Research, Evaluation and Planning Assistance Staff Operations, hearings.....	288
Navy Dept., provisional payments by Hazeltine Corporation, GAO review.....	2330
Navy Dept., retention by General Dynamics/Pomona, Division of General Dynamics Corporation, Pomona, Calif., of refunds related to illegally imposed local taxes included in prices of contracts, GAO review.....	8321
Navy prime contractors, selling to nuclear submarine components, Westinghouse subcontracts, GAO investigation into pricing, overpricing of spare electronic parts under Army Dept. fixed-price contracts with Burroughs Corporation, GAO review.....	8316
purchase of natural gas, coal, or oil for production of public utility services, provide equality, report.....	11953
renegotiation—	
act of 1951, as amended.....	3308
allowance and allocation of advertising expenses.....	3311
ruling.....	5710, 20121
staff bulletins.....	3311
what it is, how it works.....	3312
renegotiation rulings and bulletins, index.....	20121
research and development, hearings.....	290, 13652
safeguarding classified information, industrial security manual.....	4796

	Entry
Government contracts—Continued	
selling to NASA.....	11087
small business act, amend to exempt Government construction contracts from SBA set-aside program, hearings.....	13793, 18930
small business opportunities from Army Materiel Command, guide.....	16823
synopsis of proposed procurement sales, and contract awards.....	3524
term contract TC series.....	2283
termination, etc., Navy administration manual.....	7373
TFX contract investigation, hearings..... 10015, 12019, 13809,	15386, 19056
transportation of mail, modernize laws—	
hearing.....	15328
report.....	15241
value of prime contracts awarded in areas of substantial unemployment.....	4274
Walsh-Healey public contracts act—rulings and interpretations.....	16655
text, as amended Aug. 25 1958.....	14772
water supply contracts, renewal—	
law.....	13418
reports.....	6164, 11984
X-22 (VTOL) contract award, hearings.....	15374
Government documents, see Government publications.	
Government employees, see Government officials and employees.	
Government Employees, American Federation of, see American Federation of Government Employees.	
Government employment, see Employment.	
Government indemnity, see Indemnity.	
Government of District of Columbia, see District of Columbia.	
Government offices:	
administrative practice and procedures investigations—	
expenses, report.....	6250
report.....	8059
claims settlement by Federal agencies, report.....	13581
cost reduction through better management.....	7723
defense agencies, appropriations, 1964, military construction, hearings.....	15298
drug policies, interagency coordination, hearings..... 4781, 10014,	19054
electronic data processing equipment use, interim report.....	15265
emergency preparedness program, Executive orders prescribing responsibilities.....	13872
excess and surplus personal property utilization and disposal at selected installations, GAO review.....	595
fiscal requirements, joint committee to evaluate—	
hearings.....	8112
report.....	8087
general Government matters, appropriations, 1964—	
law.....	13429, 17039, 20443
reports.....	13572, 13743
Government organization manual, 1963-64.....	13934
independent offices, appropriations, 1964—	
hearings.....	18919
report.....	18887

# INDEX 1963

	Entry		Entry
Government offices—Continued		Government officials and employees—Con.	
interagency coordination, etc., study—		city taxes, withholding by Federal agencies, amend internal revenue code, report.....	4747
authorization, report.....	6246	claims settlement by Federal agencies, report.....	13581
expenses, report.....	20586	dual compensation—dual employment laws, modernize, hearings.....	17181
interagency coordination of information, hearings.....	12017	electronic data processing equipment use by Government, manpower problems, hearing.....	17182
interagency training programs.....	4625, 13328	employees of detective agencies prohibited employment in any Government service, repeal portion of act of Mar. 3, 1893, report.....	17247
joint financial management improvement program, annual report 1962.....	586	employment and payrolls, monthly release.....	4205
licensed attorneys' automatic admission to practice before Federal agencies, hearings.....	17316	equal employment opportunity, goal of President's Committee on Equal Employment Opportunity.....	12973
manpower utilization in Federal Government, hearings.....	13665, 20504	Federal career directory for college students.....	4623, 16945
meetings of Banking and Currency Committee, House, with officials, hearings.....	7988	Federal employees—	
meteorological research and development, current activities.....	16657	allotments of pay for State income tax withholding, regulations.....	20210
national security operations, investigation authorization, report.....	6248	facts.....	7787, 15106, 16946
organization of Federal executive departments and agencies—		financial protection.....	16946
chart.....	8114	Federal employment—	
committee print.....	8115	monthly report.....	3920
report.....	8061	role of Civil Service Commission, statistics bulletin.....	18732, 3648
personnel security practices, rules and regulations, hearings.....	15398	Federal news clip sheet.....	3663
policies and procedures, General Accounting Office guidance manual.....	584-585, 4994-95, 10253, 19275-278	Federal personnel, bimonthly statistics.....	3414
records and papers, disposition, reports.....	7920-22, 7969, 9881, 11793, 11852, 13591, 17102, 17140.	group life insurance, FPM manual supplement.....	15109
reorganization, <i>see</i> , in main alphabet, Government reorganization plans.		hazardous duty pay, amend classification act—	
reports on obligations, regulations, research expenditures, create select committee to investigate—	11353	hearing.....	8008
hearings.....	17187	report.....	7950
reports.....	17136, 18880	health benefits act, additional choice of plans—	
safeguarding classified information, Industrial security manual.....	4796	hearings.....	8005, 10022
scientific and technological communication, organization and coordination of information.....	18275	law.....	13433
scientific information activities.....	12935	reports.....	7951, 11994
selected activities, survey, hearings.....	289, 2050, 13578	health benefits act, amendments—	
statistical services.....	15023	hearings.....	15401, 17178-179
summer employment of college students, 1961.....	9954	report.....	18867
print as Senate document, report.....	6282	health benefits program—	
summer employment opportunities.....	4628	Government contribution, increase, hearing.....	15401
survey of selected activities, reports.....	7966-67, 11794-795	need of CSC to curtail overinsurance, etc., GAO report.....	12207
Washington Agencies Recruiting Conference, proceedings.....	7793	interagency training programs.....	4625, 13328
<i>see also</i> Government supplies.		knowledgeable plastics personnel, directory.....	17352
Government officials and employees:		manpower utilization in Federal Government, hearings.....	13665, 20504
Alaskan duty, transportation of private motor vehicles—		occupations, blue-collar workers.....	18733
hearing.....	15311	personnel and pay systems, introduction to new executives.....	6030
report.....	18852	political activity under Hatch act—	
appeals, functions of hearing, committee members conducting hearings, guide.....	190	restrictions, civil service pamphlet.....	9755
back pay act of 1963—		rules for Federal employees.....	7787
hearing.....	11911	position-classification standards.....	4022
report.....	11802	position classifiers manual.....	12241
benefits and beneficiaries under public employee retirement system, 1962.....	11287	postal employees, instructions and information.....	4024
blue collar occupational families and series, handbook.....	16951-952	premium pay in lieu of pay at saved rates—	
careers.....	18734	hearing.....	15326
		report.....	15264
		purchase goods from Indians, amend law, report.....	20579
		reemployment rights for those who perform duty in Armed Forces.....	9757
		remarriage tables, based on experience under U.S. employees compensation system.....	14696

# JANUARY-DECEMBER

	Entry
Government officials and employees—Con.	
retired, health insurance program, act of 1960, administrative expenses—	
hearing .....	9945
report .....	7952
retirement systems, State and local government employees .....	18642
salaries—	
annual report on statutory salary systems, message from the President .....	9839
summary analysis of President's proposal for reform of Federal statutory salary systems .....	13666
salary act of 1963, hearings .....	18957, 20502
salary classification laws, compilation .....	210
scientific and technical personnel in Federal Government, 1959-60 .....	1362
State, health benefit programs .....	14663
transportation of remains, etc., of Federal employees dying in Alaska and Hawaii, report .....	17282
unemployment compensation by industry and State .....	3615
unemployment insurance programs .....	17406
United States personnel security practices, hearings .....	17321
voluntary pay roll savings plan for purchase of U.S. savings bonds .....	3356
white-collar workers .....	9758
women in Federal service .....	3406
work injury facts, 1961, distribution of occupational groups .....	8191
work stoppages, Government employees, 1942-61 .....	10893
see also Civil service—Civil service pensions—Conflict of interests—Government offices.	
Government officials and employees health benefits, FPM supp. ....	15110
Government Operations Committee, House:	
activities report, 1961-62 .....	6196
calendar .....	3835
committee prints .....	6196, 11906, 13651
hearings .....	288-290, 2049-50, 4755, 9936-37, 11902-905, 13648-050, 13652, 15310-313, 17169, 18944.
investigations and studies—	
report .....	6126
travel authorization, report .....	6110
reports .....	7966-67, 9914, 11794-795, 13546, 13552-553, 13569, 13571, 13578, 13622, 15243, 18852-853, 18871, 18888-890.
Government Operations Committee, Senate:	
activities, report .....	8048
calendar .....	3853
committee prints .....	2094, 4773-79, 12018, 13807-808, 15385, 17311-312, 19055.
hearings .....	330, 4780-81, 6299-6300, 8111-13, 10014-15, 12017, 12019, 13805, 13809, 15386, 17313, 19052-54, 19056, 20609.
investigations and studies—	
interagency coordination, etc.—	
authorization, report .....	6246
expenses, report .....	20586
intergovernmental relations authorization, report .....	6247
national security operations authorization, report .....	6248
Permanent Subcommittee operations, authorization, report .....	6245

	Entry
Government Operations Committee—Con.	
Senate—Continued	
reports .....	6234-37, 8058, 8051, 8087, 11052-955, 13747, 17247.
Government periodicals, see Periodicals.	
Government personnel manual, see Civil service.	
Government printing and binding, see Public printing and binding.	
Government Printing Office:	
appropriations, 1964, legislative—	
hearings .....	13791
reports .....	11830, 13750
audit report, 1962 .....	8309
budget, 1964, amendments .....	9838
leaflet concerning .....	11219
training series .....	12237-238, 17536
Government property, see Public property.	
Government publications:	
factual reading for home, school, or business, list .....	20088
home canning and food preservation, list .....	11213
international exchange of publications and documents, conventions concerning message from the President .....	13675
Joint Economic Committee, released after Aug. 1962, supplement .....	4667
monthly catalog .....	3907
price lists, Public Documents Division, PL series .....	1393-98, 3263-67, 5679-82, 7393-94, 9331-35, 11220-225, 12978-981, 14653-656, 16490-491, 18277-281, 20086-87, 21078.
selected, list (periodical) .....	4186
small business suggestions, list .....	20085
splendors and heritage of United States .....	11227
State publications, monthly checklist .....	3908
subscription services, price lists .....	5679, 16490, 21078
technical reports, keywords index, semimonthly .....	3819
way to new knowledge .....	11214
see also Congressional documents—also names of departments, etc., issuing publications—also subjects.	
Government regulation and control, program, U.S. grain exports, 1961-62 .....	4977
Government reorganization plans:	
act of 1949, extend—	
hearings .....	9936
reports .....	11799, 11813
Business and Defense Services Administration (address) .....	200
civil defense, plan no. 1 of 1958, text, Executive orders, etc. ....	13316
Franklin D. Roosevelt Library—	
hearing .....	11905
message from the President .....	11761
report .....	13546
plans and statutes, 1945-62 .....	13051
Science and Technology Office, staff study .....	2058
Government securities:	
disappearance from vault of Federal Reserve Bank at San Francisco, Calif., report .....	11815
\$7.5 million, missing from Federal reserve bank of San Francisco, investigation, hearing .....	9927
United States, general regulations .....	13101
Government specifications, see Government supplies.	

Do not order from index; see indicated entry

Page 295

# INDEX 1963

	Entry		Entry
Government supplies:		Governor's School of North Carolina,	
Federal catalog system deficiencies		progressive move in education,	
within Defense Dept., GAO re-		experimental school for young	
view	12204	people of unusual capabilities,	13339
Federal item identification guides		establish (address)	
for supply cataloging, supple-	3650-60	Grace, J. L., Jr., impact-type energy	
ments		dissipator for storm-drainage	
Federal manual for supply cata-		outfalls stilling well design,	10091
logging—		hydraulic model investigation	
format and content	10034	Gracey, William:	
operating procedure	8137	altimeter-system accuracy effect on	
Federal procurement regulations,		collision probability	9162
FPR circulars	3667	calibrations of aircraft static-pres-	
Federal specifications	532,	sure systems by ground-camera	18163
2280, 4930, 6443, 8262,	10184,	and ground-radar methods	
12124, 13939, 15509,	17440,	Grade defects in hardwood timber	14852
19210, 20679.		and logs	
In-office reproduction methods us-		Grade names used in U.S. standards	4346
ing GSA supplies	539	for farm products	
manufacturer's identifying num-		Grader:	
ber and type designators, FAA		agricultural commodity (fruit,	
master index	2246	etc.), examination announce-	
specifications, standards and		ment, amdt	18722
handbooks, index	6447	agricultural commodity (meat), ex-	
standards, and handbooks, index,		amination announcement	4615
supplements	3778	amendments	7784, 18723
Federal specifications and stand-		Gradients (mathematics):	
ards—		transverse, temperature, effect on	
guide	14014	heat transfer and friction for	
where to obtain	9704	laminar flow of gases	15011
Federal standards	533-536,	Grading of commercial products, see	
2281, 4931, 6444-46, 12126-129,		names of products.	
13940-942, 15510-512, 17441-		Graduates:	
442, 19211-218, 20680-681.		college—	
Federal supply catalogs	19076-77	career opportunities in Public	
format and content, cataloging		Health Service	12984
manual	10034	1958, work and study patterns,	
Federal supply classification, direc-		1960 survey report	16448
tory and planning schedule of	2119,	fellowship program—	
class and area assignments	6314, 12039, 19087	leadership preparation in educa-	
Federal supply classification hand-		tion of mentally retarded chil-	
book—		dren	10071
alphabetic index	19074	NSF, 1963 awards and honorable	
supplements	3676	mention, list	7343
groups and classes	15407	fellowships, National Science Foun-	
numeric index—		dation program, administra-	
addendum	3674	tor's guide	11127
supplements	3675	institutions approved for post-grad-	
numeric index of classes	17343	uate training, USSR, list	8937
Federal supply code for manufac-		school, advanced work allocation,	
turers—		regulations on labor ministry	
code to name, supplement	3678	organization and state council	
excluding United States and		notice, Communist China	
Canada	4794	study	5314
name to code, supplement	3677	Grafting (botany):	
Federal test method standards	537-538,	clonal variation in western white	
2282, 8263, 13943, 20682		pine	6486
Navy, procurement directives—		Grafting (physiology):	
appendices	16470, 20011	intestinal transplants in urinary	
revisions	3953	system, physiological and his-	
preservation, packaging and pack-		tochemical study of adapta-	
ing levels, Federal standard	6445	tion, USSR	5235
procurement and small business, re-		Gragg, Donald B., occupational sur-	
port	2036	vey of airman career ladder,	
purchasing, specifications and		supply warehousing inspection	1773
sales	1493	Graham, Donald P., dwarfmistletoe	
selling to NASA	11087	survey in northeastern Wash-	
stores stock catalog	15513, 17443	ington	10213
special information on availabil-		Graham, Paul H., Maine's potential	
ity of items	4932	for wood particle board manu-	
supplement	6442	facture	1472
synopsis of proposed procurement		Graham, Richard C., Sudan, market	
and sales contract awards	3524	for U.S. products	10345
unnecessary depot handling and		Graham, Robert W., multi-g accelera-	
transportation costs of supply		tions, effect on nucleate-boil-	
items, Federal Supply Service,		ing ebullition	11017
GAO report	17513	Graham, W. J., sheath instability in	
yields and prices	4251	high-density rf induction plas-	
see also Military supplies,		ma, study	11177
Governmental units in 1962	153	Grahovac, Anka, see Super, Ann.	



Entry	Entry
Grain:	Grand Canyon National Park:
California stored, trogoderma and dermestids commonly encountered, illustrated keys to species-----	visitors' guide-----
coarse, U.S. exports under Government programs, 1961-62-----	north rim----- 12931
Common Market, production and statistics, 1950-51 through 1961-62-----	south rim----- 12932
culture, etc., publications, price list-----	Grand fir, <i>see</i> Fir.
European Economic Community regulations-----	Grand jury, <i>see</i> Indictments.
exports, St. Lawrence Seaway shipping-----	Grand Prairie region, Ark.: artificial recharge of ground water, equipment and controls used----- 10298
feed-----	artificial recharge of ground water (series)----- 10298, 14032, 20740
American surplus commodities, sales to Soviet Union and Eastern Europe-----	geochemical aspects of artificial recharge of ground water----- 20740
extend program, act of 1963-----	principles of siphons, artificial-recharge studies----- 14032
hearings----- 7978, 9994	Grand Rapids, Mich., Kent County Airport, weather observations, hourly, summary, decennial census----- 21164
law----- 11718	Grand River:
reports----- 7942, 7974, 9987	flood control, engineer report-----
for Austria under barter program, investigate diversions, hearing----- 17157	departmental edition----- 2198
foreign trade prospects----- 10208	document edition----- 2002
programs, new to achieve balance between production and demand, message from the President----- 4721	Grand (Neosho) River, John Redmond Dam, hydraulic model investigation----- 2227
feed grain program, 1961, economic appraisal----- 13840	Grand Teton National Park, general information----- 14609
feed grain program, 1962, statistical summary----- 16726	Grand Valley, Colo., irrigation development, role in community economic structure of trade area----- 13035
feed grain program, 1964, stabilizing production and needs (excerpts from talk)----- 16734	Grand Valley Water Users' Association:
foreign agriculture circulars----- 3720	repayment contract, modify-----
inspections-----	law----- 13417
carload, cargo and trucklot receipts and shipments, 1960 crop----- 13144	report----- 6153
1958 crops, carload, cargo and trucklot receipts and shipments----- 1616	Grandone, Peter, mineral industry of Louisiana----- 3063
standardized, backgrounds and artificial lighting----- 14863	Granite, impregnated-streaked semi-metallic mineralization in granites of Chu-Ilyskiy Mountains, USSR study----- 2763
market news-----	Grant, Marguerite Q., California delinquency research project experiments with alternates to institutionalization----- 15091
quarterly summary and statistics----- 3757	Grantham, William D., spin and recovery characteristics of North American X-15 airplane, investigation, etc----- 7239
weekly summary and statistics----- 3758	Grants-in-aid:
moisture content, determining, oven method compared with meters----- 18379	administered by Health, Education, and Welfare Dept----- 17537
production, France's key role in European Common Market----- 10206	administered by Public Health Service, State and territorial health authorities, participating, directory, 1963----- 14659
standards of U.S., historical review of changes----- 16705	aged, Federal financial assistance programs----- 11411
statistics supplement----- 13188	agricultural experiment station facilities-----
stocks in deliverable position at Chicago, Ill----- 4211	law----- 15153
storage regulations for warehousemen----- 9534	reports----- 9884, 13725
stored, sampling methods for determining insect populations----- 7534	Air Force research program, development----- 14915
trade in futures----- 4241	air pollution control programs-----
unloading faster from trucks with complete-opening endgate----- 7570	hearings----- 11907, 17330
Grain mills:	reports----- 13009, 13619
products, industry wage survey-----	staff study----- 17333
departmental edition----- 1168	airport program, extend time for making grants-----
document edition----- 273	hearings----- 10006
Gran, Mount, coal deposits----- 12834	report----- 17246
Gran Quivira National Monument, general information----- 18205	airport program, Federal aviation regulations----- 2247, 17423
Granath, Benjamin A., BRL shock tube piezo-electric blast gages----- 9311	Alaskan agricultural land development, report----- 13724
Grand Caillon Bayou:	automobiles for disabled veterans of cold-war, authorize, report----- 11962
flood control survey, etc., engineer report-----	awarded by N.I.H., 1962 index----- 11111
departmental edition----- 2178	Community Health Services Division, PHS, focus of research grants program----- 16496
document edition----- 2006	

# INDEX 1963

	Entry		Entry
Grants-in-aid—Continued		Grants-in-aid—Continued	
community mental health centers		highway program—	
act, hearings.....	6305, 11908	construction engineering, increase	
disaster relief manual, committee		limitation on payments—	
print.....	17312	hearing.....	13821
additional copies, reports.....	19022, 20468	report.....	13713
disaster relief, summary of allocations, report.....	9841	equitable apportionment of urban highways funds—	
documentary source material on U.S. history—		hearing.....	13821, 15331
hearing.....	13649	law.....	20438
reports.....	15243, 18856	reports.....	13615, 13620, 19018
education—		interstate system, completion, hearings.....	15331
adult basic, report.....	15276	progress (remarks).....	5700
cooperative research act, broaden, deny federal assistance to hearings.....	13645	right-of-way acquisition practices, report.....	15258
institutions which practice racial discrimination—		right-of-way activities in Virginia, Public Roads Bureau, GAO review.....	12214
hearings.....	17168	highways, interstate system, completion—	
report.....	18908	hearing.....	13821
elementary and secondary teachers, advanced study, hearings.....	13645	law.....	20438
federally affected areas, assistance—		reports.....	13615, 13620, 13712, 19018
hearings.....	11896	hospital research grant program, administrative weaknesses, GAO review.....	19288
report.....	13607	intergovernmental relations, report of subcommittee.....	8051
higher education facilities act, reports.....	11798, 15280, 19021, 20474, 20492	juvenile delinquency prevention and control, extend act—	
history of legislative proposals, 1789-1962.....	9929	hearings.....	17324
national defense education act of 1958, research projects under title 7.....	15452	report.....	17281
States and localities and institutions of higher education, digest of laws.....	9929	land-grant colleges for establishing water resources research centers—	
education and libraries—		hearings.....	8121
hearings.....	9930	report.....	8068
message from the President.....	4720	library service to rural areas, progress report.....	19119
education and related activities.....	17374	library services act—	
educational and cultural exchange program—		allotments to States.....	19093
American grantees, 1962, list.....	16572	amend, report.....	20587
annual report, July 1, 1960-June 30, 1961.....	1514	hearings.....	13646
opportunities.....	14709	reports.....	15273
special report on American studies abroad, progress and difficulties, report.....	15186	local review of State and local applications, hearings.....	17313
special study of effectiveness, report.....	9836	low-income housing demonstration program, guide.....	12240
educational grants for mineral research, hearing.....	20611	manpower development and training, projects approved July 1, 1962-June 30, 1963.....	19103
educational television facilities act of 1962, explanation.....	13849	maternal and child welfare and combating mental retardation—	
educational television facilities construction, rules and regulations.....	14038	law.....	20437
exchange-of-persons program, beacon of hope.....	18375	reports.....	15275, 17118, 19017
fallout shelters—		mental health project, NIMH program.....	19967
hearings.....	11882	mental retardation, assist States in combating, hearings.....	6305, 11908
reports.....	17133-134	mental retardation facilities and community mental health centers construction act of 1963—	
Federal-aid highway act amendments of 1963—		hearings.....	11908, 15318
hearings.....	15331	law.....	20445
law.....	20438	reports.....	11950, 17114, 17135, 18914
reports.....	13615, 13620, 19018	migratory farm workers—	
fishery research, etc., projects of States, report.....	13756	and their children, improve educational opportunities—	
graduate fellowship program leadership preparation in education of mentally retarded children.....	10071	hearings.....	10021
graduate training in engineering, mathematics, and physical sciences.....	3260	report.....	11971
health research facilities construction program, GAO review.....	2326	day-care services for children—	
health research projects, 1951-62.....	16535	hearings.....	10021
highway construction practices in Arizona, hearings.....	13668	report.....	11968
		sanitation facilities—	
		hearings.....	10021
		report.....	11969
		national defense education act graduate fellows, addresses, schools, and fields of study, list.....	10074
		National Heart Institute research, drugs and heart disease.....	19961-962

# JANUARY-DECEMBER

	Entry
Grants-in-aid—Continued	
National Science Foundation—	
graduate fellowship program, administrator's guide	11127
institutional grants for science, 1963	3192
undergraduate instructional scientific equipment program, 1962-63	11133
phase 3	14616
nurse traineeship program, short term training course	14671
nursing homes, construction, etc., Federal aid, information	20078
nursing homes for veterans—	
hearings	15334
report	15291
outdoor recreation planning grants to States, hearings	293
Philippine Islands, appropriations, 1964, hearings	18919
Philippine veterans hospitalization, agreement with Philippines	16600
Philippines, for veterans hospitalization, extend program—	
hearing	8126
law	13414
reports	6140
public facility, etc., Federal laws	6573
Public Health Service, 1962 funds—	
construction of cancer research facilities, etc.	11109
health services, formula and project	9229
mental health training	9228
research	9227
training grants, traineeships, fellowships, etc.	21034
Public Health Service, 1963 funds—	
construction of health research, hospital and medical facilities, research	21036
Public Health Service guide	21035
Public Health Service research programs, guide for applicants	19964
public works, maximum for eligible areas under accelerated program	16426
supplement	16815
research and experimentation in new educational media under Public law 85-864, title 7, program manual	4430
sanitation facilities for migratory farmworkers, hearings	17375
school districts affected by Federal activities, annual report 1962	4789
schools of public health	4806
science, mathematics, and foreign language instruction in public schools, regulations	12992
guidelines	19099
scientific research, administration and submission of proposals	20634
shared-time educational program, proposed Federal promotion, digest of relevant literature and summary of pro and con arguments	14614
small business concerns, construction of pollution treatment works, hearings	15400
specially adapted housing for blind veterans, expand, report	13824
States, etc., by Health, Education, and Welfare Dept., poster	6140
States, promote commercial fishery research and development, hearings	10303
students, financial aid—	
Education Office publications available	12011
environmental science and engineering, listing	2168
	18284

	Entry
Grants-in-aid—Continued	
training physicians, dentists, professional public health personnel, increase program—	
hearings	6199
laws	17326
summary	18776
reports	19335
training program, National Institute of Mental Health, 1948-61	6180, 7945, 17283
training teachers of exceptional children, report	1336
transportation, development of comprehensive and coordinated systems in metropolitan areas—	
hearings	13579
reports	6290, 7990, 8099
summary	7964, 8049-50
urban mass transportation, Federal aids available, fact sheet	8095
vocational education act of 1963—	
hearings	2364
reports	15309
vocational rehabilitation, projects approved	17170, 20499
vocational training for adult Indians, amend act, report	11377
water resources research study, hearings	17260
Grantz, Arthur, aeromagnetic reconnaissance of Cook Inlet area, Alaska	6553
Granular materials:	
aqueous slurries, bibliography	14497
electrostatic separation	7202
Grapefruit:	
economic feasibility of radiation-pasteurizing	19090
Florida, October test shipment from Tampa to Hamburg, Germany	9533
Grapes:	
economic feasibility of radiation-pasteurizing	19090
filled boxes, machine for picking up	14836
growing American bunch grapes	7562
insecticide residues on, studies	4337
nursery products, production and sales, 1961 and 1962	14736
production, use, value, by States, 1961-62	16615
Graphic art, see Art.	
Graphic presentation of Federal employment	9752
Graphic symbols for electrical and electronics diagrams, military standard	17348
Graphical determination of response of simple line hydrophone to 2 sources	18240
Graphical-numerical method for transient response of nonlinear systems	3228
Graphite:	
high-energy neutron-induced changes	4477
low permeability properties for reactor application, techniques and procedures	14966
minerals yearbook chapter	14496
permeability to gases at high temperatures, process for reducing	14960
pitch binders, literature survey	14969
Graphoanalytical method of constructing hyperbolic net during radiogeodetic operations, USSR	6943
Graphs, see Charts.	
Graptolites, Ordovician, of Basin Ranges in California, etc.	12224
Grass, L. A., superpressure balloon for constant level flight	59

# INDEX 1963

Entry	Entry
Grasses:	
beet leafhopper control in southern Idaho by seedling breeding areas to range grass-----	9540
cost of converting brush cover to grass for increased water yield in watersheds-----	17482
culture, etc., publications, price list-----	11223
grass-legume mixtures, effects of phosphorus and potassium fertilizers on yield, etc-----	16712
lawn diseases, and how to control them-----	18426
lawns, description-----	26
ponderosa pine seedling establishment, effects-----	10227
species for seedling chaparral burns, comparison-----	17492
summer annual forage in United States-----	4348
see also Lawns	
Grasshoppers, mitotic inhibition induced in neuroblasts by exposure to ozone-----	16790
Grasslands, North China-----	15708
Gratuities, death, Architect of Capitol employees assigned to House of Representatives, authorize payment to beneficiaries, report-----	13535
Gravel:	
industry, injury experience, 1960-----	9115
minerals yearbook chapter-----	19877
operations and costs, Minneapolis-St. Paul area, Minn-----	10936
sandy, well-graded, subjected to alternate freezing and thawing cycles, results indicate tendency to become horizontal sorting-----	2189
Graves, Albert H., complete-opening endgate for faster unloading of grain from farm trucks-----	7570
Graves, E., scope of chemical explosive cratering experiment-----	16853
Graves, Richard D., hydrogenation of pitch from low-temperature carbonisation of coal-----	3082
Graves Mountain, flotation of kyanite-quartzite rock-----	16338
Gravimeters:	
acceleration of gravity from submarine, determination, USSR study-----	6676
GAK-2M, improvements, USSR study-----	732
Gravimetric analysis, see Chemistry	
Gravimetry, work in Czechoslovakia-----	8625
Gravitation:	
open forum of bold hypotheses-----	7643
tesseral harmonics, etc., derived from camera observations of satellites-----	12885
Gravity:	
acceleration with gravimeters from submarine, determination, USSR study-----	6676
anomalies, earth figure determination, USSR study-----	15801
model for any size urban area, calibration and testing-----	14679
network at USAF air bases-----	5855
seismic and gravity surveys of Naval Petroleum Reserve No. 4 and adjoining areas, Alaska-----	5020
Gray, Fred C., relief-----	15205
Gray, Leo R., marketing spreads for eggs and frying chickens in United States and selected cities-----	8149
Gray, Thomas E.:	
preparation characteristics of coal from-----	
Kanawha County, W. Va-----	19867
Nicholas County, W. Va-----	8068
Gray, William R., metalworking machinery, summary for 1962-----	15064
Grayhet, V. G., high power density development, interim report, 300 MWe HPD conceptual design study-----	1828
Grayson County, Tex.:	
ground-water geology-----	10300
oil recovery, effects of water injection-----	9135
Grazing:	
lands administered by Forest Service, regulation governing-----	17475
spring, crested wheatgrass in northern New Mexico, cattle gains, etc-----	16758
Taylor grazing act-----	19060
amend, hearings-----	8120, 10016
Grazing districts, Ely, Nev., hydrology of stock-water development-----	5026
Grease, infrared spectra-----	20296
see also Lubricants	
Greasewood, livestock poisoning in Western States, reducing losses-----	14856
Great Basin, graptolites, Ordovician-----	12224
Great Britain:	
agricultural products, demand, etc., projected levels, 1965 and 1975, summary and evaluation-----	17356
atomic energy, cooperation for civil uses, agreement-----	18333
economic developments, 1962-----	8402
economy, basic data-----	6614
educational data, England and Wales-----	20633
European and British Commonwealth series-----	9395, 13061
exports and imports, licensing and exchange controls-----	2383
incomes, national commission, functions and problems, etc-----	19804
lights and fog signals, lists-----	3209, 21052
liquid metal studies-----	12846
living conditions-----	2432
meteorological research projects in Barbados, agreement-----	9426
mutual defense assistance, disposition of equipment and materials, machine tools, agreement-----	20181
outdoor recreation survey-----	1350
Polaris sales agreement-----	13076
south coast of England, sailing directions-----	3202
space vehicle tracking stations, agreement with United States and Bermuda-----	21135
trade agreement-----	2035
United States compensatory concessions under GATT, agreement-----	11304
west coast of England and Wales, sailing directions, change-----	21048
Great Falls, Mont., International Airport, weather observations, hourly, summary, decennial census of climate-----	14790
Great Lakes:	
commercial fisheries-----	
economic review, 1940-59-----	13952
research and development-----	13953
fisheries, 1961, annual summary-----	10185, 13950
harbor study, engineer reports-----	
Alpena Harbor, Mich-----	
departmental edition-----	19140
document edition-----	18807
Burns Waterway Harbor, Ind-----	
departmental edition-----	20650
document edition-----	20455
Calumet Harbor and River-----	
departmental edition-----	2199
document edition-----	2005

# JANUARY-DECEMBER

	Entry		Entry
Great Lakes—Continued		Greathouse, William K., performance characteristics of several divergent-shroud aircraft ejectors	5519, 10974
harbor study, engineer reports—continued		Greebler, P., Doppler calculations for large fast ceramic reactors	14981
Cleveland Harbor, Ohio—		Greece:	
departmental edition	413	agricultural commodities agreement	7444
document edition	254	atomic energy, cooperation for civil uses	9414-15
Green Bay Harbor, Wis.—		doing business in Greece, report of 1962 U.S. Trade and Investment Development Mission	5057
departmental edition	414	economic developments, 1962	8403
document edition	232	educational data	8329
Manitowoc Harbor, Wis.—		establishing business	2392
departmental edition	415	fisheries, 1962	19235
document edition	236	investment guarantees, agreement	13089
Oswego Harbor, N.Y.—		living conditions	6592
departmental edition	416	sending gift packages to	2409
document edition	233	United States foreign aid program, report of study	19055
Rouge River—		Green, Alan W., thinning falls to stimulate 50-year-old white pine	12166
departmental edition	2200	Green, Francis L., Lee County, S.C.	13059
document edition	1980	Green, Owen L., relief	13520
Saginaw River—		Green, Ralph J., jr., mint farming	5615
departmental edition	2201	Green, Thomas E., determination of copper in tungsten metal, etc.	16346
document edition	1988	Green, William E.:	
lights list and other marine aids	6041	methods for determining cumulative goose kill on special areas	13977
navigation all year, study, reports	13707, 18909	waterfowl utilization and hunting kill, 1946-60, Upper Mississippi River Wildlife and Fish Refuge, etc.	16537
notice to mariners	3974	Green Bay, Wis.:	
pilot, survey	7180	Austin Straubel Airport, weather observations, hourly, decennial census	20243
supplements	1189, 10090, 12814, 14485, 16299, 18052, 19807	electric facilities of area, map	517
pilotage regulations, etc.	11687	harbor improvements, engineer report—	
pilotage services, agreement with Canada	11820	departmental edition	414
small craft, gale and whole gale warning facilities charts	13129-130	document edition	232
transportation lines, 1963	13882	occupational wage survey—	
trawler conversion	4957	departmental edition	1173
waterborne commerce—		document edition	278
1961, foreign	15087	port, harbor conditions, etc.	2215
1961, with summary, 1952-61	12817	Green River:	
1962	19149	oil shale from Colorado, physical structure	7220
waterway to Hudson River, improvement, complete, hearing	19068	oil shales, oil yields from core and drill-cutting sampling	19870
Great Lakes States:		Greenhall, Arthur M., bamboo mon-goose trap	19245
botanical and commercial range of jack pine	15562	Greenland:	
conifers, direct seeding	12188	air navigation services, joint financing—	
forest fire research program	12153	agreement with other Governments	14724
forest tree seed crop averages fair, 1962	12173	International agreement	10591
Northern—		approach roads, 1956-57 program	10093
economic development, etc., for job ahead (address)	20282	east, sailing directions, change	5849
regional land and people conference, keynote address	20283	ice sheet, stratigraphic studies in snow and firn	2188
principal electric facilities, map—	517	near Thule, electrical D-C resistivity measurements on glacier ice	4848
pulpwood production—		northeast, arctic earth science investigations	1749
counties, 1961	6488	northwestern, fog, size distribution and water content	4841
up, 1962	15570	theory of densification of dry snow on high polar glaciers	6362
sapstreak in sugar maple, current status	12175	tide tables, 1964	9766
wood-products, imports and exports via St. Lawrence Seaway	6511	Greenlee, Marvin M., relief	7886
Great Plains:		Greenlee, R. E., electron-beam welding, its industrial potential, etc.	5983
alluvial rivers, similarities and differences	19305		
commercial wheat farms, costs and returns, 1962	15413		
fruits for high altitude section of central region	1627		
State and local governments, revenues and expenditures	4902		
States, soil and water conservation research	4366		
Great Salt Lake, aircraft accident	18710		
Great Smokey Mountains National Park:			
land donations for roadway entrance law, accept—	17050		
reports	9876, 17263		
Greater Aneth area, Utah, reservoir oil characteristics, saturation-pressure variations	10944		



# INDEX 1963

	Entry
Greensboro, N.C., Greensboro-High Point Airport, weather observations, hourly, summary, decennial census.....	21187
Greenshields, David H., spectrometric measurements of gas temperatures in arc-heated jets and tunnels.....	20987
Greenville, N.C., Voice of America complex.....	5761
Greenville, S.C.: occupational wage survey— departmental edition.....	16279
document edition.....	15170
Greenwood, Ind., railroad accident.....	10361
Greer, Edith S., pupil marks and school marking systems, selected bibliography.....	19115
Gregg, H. Raymond, appendix to proposal, Ozark Rivers National Monument.....	3185
Gregoras, Constantinos A., see Grigorias, Constantinos A.	
Gregory, Donald T., static longitudinal stability, etc., 3-stage missile.....	10996
Greif, Richard K., wind-tunnel tests of circular plan-form aircraft with peripheral jet, etc.....	7245
Greybull River, geology and ground-water resources of area.....	8345
Grid systems, see Maps and charts.	
Grids (screens): electron-bombardment ion-thrustors, studies.....	16363
Griffin, Nelda, how adjustable revolving fund capital plan works.....	12093
Griffin, Noyce L.: electronic and related electrical equipment in hospitals.....	14666
hospital electroencephalographic suite.....	14667
Griffin, Verna E., technical assistance in area redevelopment.....	11524
Griffin, Ga., consumer expenditures and income, 1960.....	14460
Grigorias, Constantinos A., relief.....	9557
Grimaldi, LAC 74, lunar chart.....	7620
Grimes, W. V., relief.....	17094
Grimwood, James M., Project Mercury, chronology.....	19904
Grinders, precision grinding, effect of thermal deformations of machine units on machining accuracy.....	13220
Grinding machines, see Grinders.	
Grisaffe, Salvatore, J., particle-substrate bonding of plasma-sprayed materials.....	18136
Griswold, S. Smith, community approach to air pollution control, role of control officials.....	3275
Grizell, William G., filling polyethylene film bags with citrus fruit.....	13146
Grocery stores, see Stores.	
Grocery trade, see Stores.	
Groen, Joseph M., effect of aerodynamic heating on flutter of thin flat-plate arrow wings.....	11064
Gronouski, John A.: addresses, etc.....	
Oct. 24, 1963.....	20024
Oct. 26, 1963.....	21071
Oct. 30, 1963.....	21073
Nov. 4, 1963.....	21072
Nov. 12, 1963.....	21068
nomination, hearing.....	19067
Groom, Phyllis, American labor in 1962, retrospect.....	7141
Grosch, Wesley A., mineral industry of Wisconsin.....	20962

	Entry
Gross, Donald S., aerodynamics of ground effect machines, experimental studies.....	3385
Gross national product in Soviet Union, comparative growth rates.....	7734
Grossman, R. E., static commutator.....	5871
Ground, see Earth.	
Ground conductivity, see Electric conductivity.	
Ground effect: aerodynamic characteristics of model with high disk-loading lifting fan mounted in fuselage.....	3149
GETOL configuration take-off and landing feasibility and potential, research program.....	9463
sweptback wing jet transport with blowing boundary-layer-control trailing- and leading-edge flaps.....	11074
Ground effect machines: aerodynamics, experimental studies.....	3385
annular jet configuration in ground proximity, low-speed wind-tunnel investigation.....	9186
Jack Conex mover, cost, etc.....	20208
optimized propellers, determination.....	18350
recirculation principle— for man-carrying test vehicle and component testing.....	7484
improvements by major modifications to man-carrying test vehicle (MCTV), investigation.....	18352
preliminary flight test results.....	11350
see also Air cushion vehicles.	
Ground instructor, instrument, FAA written examination guide.....	2303
Ground rent, see Rent.	
Ground squirrels: Arctic, retention of viral agents, effect of hibernation.....	18476
autonomic control of circulation during hibernating cycle.....	18204
hibernation, changes in intestinal flora.....	11500
Ground temperature observations: Aniak, Alaska.....	12087
Fort Yukon, Alaska.....	4844
Ground water, see Water—Water supply.	
Grounds, see Public property.	
Group behavior, military small group performance under isolation and stress, critical review.....	1762-66
GROUTING, shrinkage-resistant grout mixtures, investigation, errata.....	2231
Grove, D. J., variation of neutral density with time in C-stellarator discharges.....	14988
Grove, Frank, relief.....	17094
Groveland Mine, open-pit iron mining, milling, and costs.....	14501
Growing American bunch grapes.....	7562
Growing figs in South for home use.....	29
Growth: and yield of slash pine plantations, basal area of natural loblolly pine standards.....	19264
blackberries.....	14857
children, research programs, studies in progress.....	176, 11647
ponderosa pine, uniformity among growth layers in 3 specimens.....	5721
red pine, 60-year old, growing stock density, progress report.....	579
western white pine, stimulation by cultural treatment.....	17479
white pine plantation, 50-year-old, thinning fails to stimulate growth.....	12166
yellow-poplar and oak, past growth as indicator of potential.....	15575

# JANUARY-DECEMBER

	Entry		Entry
Grubbs, Eloyse, key new educational media personnel in public school and library systems in States, etc., 1962-63.....	17379	Guaranties and sureties—Continued	
Gradnaya khirurgiya (periodical): translations.....	6808, 10745	Investment guaranties—	
Grumman Aircraft Engineering Corporation, spare parts, etc., purchased, overpricing, GAO review.....	8317	AID under foreign assistance act, opinion of Attorney General.....	19773
Grün, Susanna, relief.....	18981	countries where available.....	2436, 15635
Gruber, William J., modern science and your child.....	19105	specific risk, issued through June 1963, report.....	15656
GSA, see General Services Administration.		mutual deposit guarantee corporations, tax exemption, report.....	13580
GSA supply services to military activities.....	596	union safeguards, labor-management reporting and disclosure act of 1959.....	18024
GSR, see Galvanic skin response.		Guatemala:	
GTP bulletin.....	10642	alliance for progress programs, report on study mission.....	8023
Guam:		print as S. doc., report.....	20571
aircraft accident.....	9735	British Honduras boundary, study, defense, furnishing articles and services, agreement.....	20153
basaltic and andesitic volcanic rocks, and relation to rocks of Saipan and Japan.....	15611	economy, basic data.....	1542
census of housing, 1960, State and small areas, tenure, rent, plumbing, etc.....	1919	import tariff system.....	6588
geology (series).....	10280	investment guaranties, agreement, labor law and practice.....	5078
geology and hydrology (series).....	15611	living conditions.....	9047
geology and hydrology of Guam, Mariana Islands (series).....	10316	Peace Corps program, agreement, PGT strongly condemns Carlos Manuel.....	6601
Governor—		plant quarantine import requirements.....	11324
nomination of Manuel F. L. Guerrero, hearing.....	4782	press evaluation of Francisco Villagran Kramer.....	2806
report, 1962.....	10311	shrimp fisheries, survey.....	9551
petrology of volcanic rocks.....	15611	Guenther, Kenneth A.: economic developments in Philippines, 1962.....	2693
population, 1960 characteristics.....	20349	licensing and exchange controls in Philippines.....	2292
rehabilitation, reports.....	17112, 20382	Guerrilla warfare, Philippines, lessons learned 1946-53, facts for Armed Forces (lecture).....	6619
soils, mineralogy and description of profiles.....	19316	Guernsey cattle, see Cattle.	2384
submerged lands, place within jurisdiction of Government of Guam, reports.....	9862, 19040	Guerrero, Manuel F. L., nomination, hearing.....	4782
Tertiary larger Foraminifera from Guam.....	10289	Guerrilla warfare:	
urban renewal and housing, authorize public authority, reports.....	13567, 20583	operations against guerrilla forces, tactics, techniques, etc., utilized by Marine Corps.....	1193
volcanic rocks, trace elements.....	15611	third challenge, facts for Armed Forces.....	7658
Guam Magnetic Observatory, magnetograms and hourly values.....	20388	Guerrillas, tactics, techniques, etc., employed by guerrilla forces.....	1193
Guantanamo Naval Station, excess cost of milk, GAO report.....	12201	see also Communist guerrillas.	
Guaranties and sureties:		Guidance:	
AID quarterly report—		career exploration, guide for extension workers.....	4371
applications in process.....	4129	career guidance for rural youth.....	14875
investment guaranties issued.....	4128	character, discussion topics, Army pamphlets.....	102, 7668, 18545
companies acceptable as sureties on Federal bonds, list.....	16635	children in elementary schools.....	13862
export credit insurance and guarantee programs.....	14071	help for disabled through vocational rehabilitation.....	9484
informational media, agreement with Guinea.....	9406	national defense education act of 1958, NDEA and higher education (periodical).....	3954
investment, agreement with—		services in elementary school.....	376
Colombia.....	2358	State Department of Education personnel, directory.....	19096
Cyprus.....	16586	VRA, 15th annual workshop, proceedings.....	9483
Ecuador.....	21130	VRA workshops, proceedings dealing with small business enterprises.....	16644
Gabon.....	14713	workers certification requirements.....	16431
Greece.....	13089	see also Counselors.	
Guatemala.....	1527	Guidance systems:	
Ivory Coast.....	7448	contractor control systems, 3d order, with zeros in their transfer functions, investigation, errata.....	11016
Jamaica.....	9422	guidance perturbations for low-thrust Mars orbiter mission using Snap-8, analysis.....	1278
Jordan.....	20171		
Malagasy Republic.....	20176		
Nepal.....	16611		
Niger.....	1555		
Republic of Congo.....	11825		
Trinidad and Tobago.....	9428		
Tunisia.....	13088		
United Arab Republic.....	16605		
Venezuela.....	13064		
Vietnam.....	20187		

# INDEX 1963

	Entry
Guidance systems—Continued	
reentry vehicle, aerodynamic skip flight, approximate solutions of trajectory equations to control, study	16397
space vehicle approaching earth, effect of deadband about desired perigee	5597
spacecraft	5545
surface-to-air missile weapon control, engineering design handbook, OKD pamphlet	3245
Guide books:	
boardinghouses and campsites for motor tourist, USSR study	8719
Caucasus coastal resorts	14160
Crimea, USSR	15710
Kuybyshev, RSFSR	6766
step into action, for above-knee amputee	9356
Yenisey River area, USSR	10730
see also Pocket guides.	
Guide for implementing handbook 3, property accounting for local and State school systems	8172
Guide to laws enforced by Alcohol and Tobacco Tax Division, for law enforcement officers	5051
Guide to specifications and standards of Federal Government	14014
Guided missiles, see Missiles.	
Guidelines for urban economic development studies	10306
Gullion, R. B.:	
aerial radiometric survey	14995
Galveston area (ARMS-2)	5930
Guinea:	
agricultural commodities, agreement	18332
informational media guarantees agreement	9406
Pan-African and Guinean events reported in Guinean Democratic Party daily, Horaya, Sept. 4-11, 1962	1043
Peace Corps program, agreement—telecommunication, radio facilities for transmission of official messages, agreement	9412
Guinea fowl, raising, marketing, etc.	19587
Gulf, see name of gulf or place where located.	7569
Gulf Coast:	
light lists, Little River, S.C. to Rio Grande, Tex., and Antilles, storm warning facilities chart, Morgan City, La. to Apalachicola, Fla., 1963	4641
transportation lines	5770
waterborne commerce, 1962	6377
Gulf Farmer (SS): launching ceremonies at Avondale Shipyards, New Orleans (remarks)	19148
Gulf Intracoastal Waterway, see Intracoastal Waterway.	
Gulf of Mexico, see Mexico, Gulf of.	
Gulf of Tehuantepec, see Tehuantepec, Gulf of.	
Gulf States:	
earnings in shellfish processing industry	9064
fisheries, 1961 annual summary	2285
shrimp canning industry	13960
strawberry culture	1690
Gully-control structures, see Culverts.	
Gunderson, Doris V.:	
check list of practices for teaching English	364
research in reading at primary level	19116
Gunners, Army, selection of anti-tank missile gunners, status report—see also Gunner's mates.	4467

	Entry
Gunner's mates, G 1 & C, Navy training course	14630
Gunnery:	
Naval gunfire support, manual	3045
small arms ranges, Air Force manual	9808
Gunnison County, Colo., Cebolla Creek titaniferous iron deposit, diamond-drill sample data statistical analysis	14508
Gunnison River Basin, water and related land resources	13193
Guns, see Machine guns—Shotguns.	
Gunsight Mark 31 Mods 1, 2, 3, 4, and 5 etc., overhaul	11194
Guralnick, Lillian:	
mortality among men 20 to 64 years of age—	
by industry and cause of death	20114
by occupation level and cause of death	20113, 20115
Gusta, see Winds.	
Guthrie, Nobel, immunization status of 2-year-old infants in Memphis and Shelby County, Tenn	16509
Gutierrez Fernandez, Antonio, relief.	6223
Guyandot River:	
bank protection project, authorize construction—	
law	17051
reports	15247, 17254
flood control, engineer report—	
departmental edition	2202
document edition	1999
Gyponidae, catalog	1647
Gypsum:	
and products, mineral industry survey, quarterly	3760
decomposition in fluidized-bed reactor	19859
minerals yearbook chapter	19834
Gypsy moth, see Moths.	
Gyrocompass, J-2 gyro magnetic compass components available in military supply systems, unnecessary procurement and repair costs by Army Dept., GAO report	20724

## H

H.E.L., see Human Engineering Laboratories.	
H.E.W., see Health, Education, and Welfare Department.	
H.H.F.A., see Housing and Home Finance Agency.	
H.O. publications	1364, 3201-9
Haas, John T.:	
feeder pig pooling, improved marketing through grading and commingling	4357
veal calf pooling, improved marketing through grading and commingling	16747
Haase, Herta, educational data, Federal Republic of Germany	8104
Haase, Kenneth W., persons injured in home and associated disability	5686
Habersham County, Ga., soil survey report	14701
Haddock:	
illeta, effects of sub-sterilization doses of radiation on storage life extension, final summary—length and age frequency samples—	4486
Georges Bank and Gulf of Maine landings, 1956-60	8283
Georges Bank landings, 1931-55	8282
line-trawl fishery, Chatham, Mass.	17450
Haddon, William, Jr., skiing injuries	14672

# JANUARY-DECEMBER

Entry

4630

3048

0808

4508

3193

1194

0114

0116

5009

223

051

234

202

999

647

760

859

334

24

0

57

17

34

16

1

6

3

2

0

2

Entry

4495

5589

1240

16349

19874

13967

3306

18943

20481

20960

10333

17807

2240

20289

14880

9015

20150

582

5030

15623

5016

9634

5830

6563

11349

8101

10190

4997

16318

16331

19257

19261

7368

17589

14871

Entry

1252

2347

18234

5476

2341

4980

14033

1236

14856

18233

18190

19968

11006

9333

12878

14563

8402

6814

14754

2342

20735

19318

15602

1751

1182

11458

5031

16286

15177

Do not order from index; see indicated entry

Page 305



# INDEX 1963

	Entry
Hama, Vladimir:	
numerical evaluation of ion-thruster optics	11042
numerical solution of axially symmetric Poisson equation, theory and application to ion-thruster analysis	12859
Han-ch'uan Hsien, China, brief gazetteer, translation	802
Hancock, Claire, children and neglect, hazardous home conditions	19155
Hancock, Glendal W., relief	7908
Hancock, J.C.:	
information transfer efficiency of wideband communications systems—	
pt. 2. Binary communication systems using wideband signals	7595
pt. 3. Wideband communication system	9598
Hand County, S. Dak., soil survey	13052
Hand tools:	
basic, Navy training course	9265
Federal item identification guides for supply cataloging, supplements	3653
Handbooks, Federal, index, supplements	3778
see also names of departments, etc., issuing handbooks—also subjects.	
Handford, John F., basic data on economy of Federation of Rhodesia and Nyasaland	5083
Handicapped:	
children—	
blind, etc., home and school programs, developments and trends	19121
facilities and equipment, selected references	20642
special services	18111
employment practices, etc., of Federal Government (address)	18730
employment, regulations under Fair labor standards act	16653
handicapped in our democracy (address)	13327
how handicapped workers in community prove that ability counts, 1964 report theme contest, 11th- and 12th-grade students, announcement	9034
jobs for handicapped, program guide 1963-64, pathways to action	18029
National Ability Counts Contest, announcement	1157
older workers, vocational rehabilitation	13112
operation-volunteers, program to help	10889
performance, story of the handicapped	4014
physically and mentally, milieu rehabilitation	14768
rehabilitation-special education co-operation on prevocational programs, conference proceedings	20225
reservoir of talent (address)	18730
selective placement, hiring according to abilities	18735
Handicraft:	
bibliography	11272
spruce root basketry of Alaska Tlingit	15032
Handling and storage of liquid propellants	13834
Handling equipment:	
aircraft, ground, Federal item identification guides for supply cataloging, supplements	3660

	Entry
Handling equipment—Continued	
aircraft support equipment, general handling & safety manual	11193
materials, Federal item identification guides for, supplements	3632
meat, plastics for construction	13159
Handling qualities and operational problems of large 4-propeller STOL transport airplane	5599
Hanel, R. A., infrared horizon of planet earth	18146
Haney, George R.:	
problems and trends in migrant education	20639
selected references on migrant education and migratory labor	6343
selected State programs in migrant education	19118
Haney, Glenn P., revised shortleaf pine bibliography	8303
Hanford reactors, see Reactors (atomic).	
Hangers:	
doors—	
full group power-operated horizontal sliding type, standard of trade	7728
partial group power-operated horizontal type, standard of trade	7727
power-operated unbraced canopy type, standard of trade	7729
Hanlon, Frederick B., ten-year chronology of U.S. Court of Military Appeals, 1951-61	4799
Hanna, William, proceedings of Nuclear Propulsion Conference	18592
Hanna Mining Co., open-pit iron mining, milling, and costs	14501
Hannan, John P.:	
comparative physiology of temperature regulation	13209
effects of cold acclimatization of liver di- and triphosphopyridine nucleotide	11498
seasonal variations in blood volume, etc., of Husky dog	14910
Hanover, James W., clonal variation in western white pine, graftability	6486
Hanover, N.H.-Norwich, Vt., Interstate School District, establishment, granting consent of Congress, reports	17108, 20594
Hanrahan, D. J., three-phase static inverter with waveform synthesis	18235
Hansen, K. F., multi-group diffusion methods	1835
Hansen, P. A., modification of his lunar theory	12868
Hansen, Q. Marlon, inertial navigation errors during reentry to earth's atmosphere	11052
Hansen, Russell K., relief	13511
Hansen, W. R., stratigraphy and structure of Rainier and USGS tunnel areas, Nevada Test Site	19315
Hansford County, Tex., natural gas, low temperature phase equilibria	3099
Hansley, Margaret E., education directory, 1961-62, pt. 3, higher education	373
Hanson, A. A., summer annual forage grasses in United States	4348
Hanson, Ardell M., accident	14076
Hanson, C. H., saponin content of alfalfa	11434



# JANUARY-DECEMBER

Entry

1193

3632

3139

5399

3146

3639

343

118

303

728

727

729

99

92

01

09

02

01

09

08

10

06

4

5

5

3

2

0

Entry

Hanson, Lincoln F., guide to programmed instructional materials, 1963	17384
Hanson, Perry W.: aerodynamic damping of Saturn SA-1 model vibrating in 1st free-free bending mode	19026
futter of very low aspect-ratio flat plate surfaces, etc.	21002
Hap Hawkins Lake, naming waters impounded by Clark Canyon Dam, report	13711
Harap, Henry, teacher preparation, 5-year programs	13868
Harbeck, Richard M.: aerospace career and scholarship information	4824
aerospace periodicals for teachers and pupils	13864
Harbor workers, see Longshoremen.	
Harbors: customs code classification, schedule D	11641
facilities design, Yards and Docks Bureau design manual, change	1600
flood control—	
hearings, 1962	301
hearings, 1963	13667, 15330, 17813
waterborne commerce, 1962	19148-50
world port index, 1963	18217
see also names of harbors or places where located.	
Hard, John S., frost damage to red pine conelets	6512
Hard of hearing, see Deaf.	
Hard woods, see Hardwoods.	
Hardaway, George D., study of water yield from Santa Fe River watershed	10240
Hardboard, see Pulpboard.	
Hardin County, Tenn.: forest inventory statistics	3379
soil survey report	18319
Harding, Francis D.: attitudes and career intentions of Air Force Officer Training School students	63
career experiences of AFIT classes of 1955 and 1956	9025
prediction of retirement of Air Force officers	4403
Hardison, C. H., low-flow frequency curves, stream-gaging stations in eastern U.S.	14035
Hardness, Knopp indentations, replica electron microscopic method for measuring	9119
Hardware: builders' engineer manual, appendix 1, samples on file in D.C., change	430
Federal item identification guides for supply cataloging supplements	3658
Hardware stores, see Stores.	
Hardwick, William R.: mining methods and costs, Inspiration Consolidated Copper Co. open-pit mine, Gila County, Ariz.	7210
open-pit copper mining, etc., American Smelting & Refining Co.	9113
Hardwoods: benches, design	17478
cull trees, methods and costs of killing	4979, 8291
laminated block flooring, standard of trade	7730
log grading, guide	10211

Entry

Hardwoods—Continued	
northern—	
demonstration of 4 intensities of management	15580
epicormic branching in young trees	20702
hemlock stands, porcupine winter feeding activity	15563
leaf fall, humus depth, and soil frost interrelationships	6490
10-year-old weeding, methods and time requirements	10220
plywood, current industrial reports	13292
seedlings, response to inorganic fertilizer	7471
structural characteristics	12170
timber and logs, grade defects	14852
underplanted trees lack merchantable growth	20694
use in making picnic tables, advantages, etc.	17500
wood brick strip paneling, new way to decorate	17477
Hardy, Edward P., Jr.: Health and Safety Laboratory fallout program	4479, 9680, 14985
strontium-90 on earth's surface	1842
Hardy, R. C., NBS viscometer calibrating liquids, etc.	3174
Harlan, Cleveland, address, June 3, 1963	14711
Harlee, John: addresses, etc.—	
May 16, 1963	10156
May 22, 1963	10157
Sept. 26, 1963	19185
Oct. 11, 1963	19189
Oct. 25, 1963	19191
Harlow, Arthur A., factors affecting price and supply of hogs	4377
Harmon, Hubert K., memorial lectures in military history (series)	13194
Harmony Week, see National Harmony Week.	
Harms, William R., spacing-environmental relationships in slash pine plantation	8301
Harnesses, restraint systems in Army aircraft, basic concept study	11349
Harper, David S., longwall mining with German coal planer, etc.	19863
Harper, John C., II, better lawns	26
Harpers Ferry National Historical Park: naming—	
law	11725
reports	8065, 9904
Harpers Ferry National Monument: changing name to Harpers Ferry National Historical Park—	
law	11725
reports	8065, 9904
general information	9239
Harrer, Clarence M., reconnaissance of iron resources in New Mexico	20948
Harrington, Don A., services for child who is hard of hearing	16917
Harrington, Jean C., search for Cattle of Raleigh, archeological excavations at Fort Raleigh National Historic Site, N.C.	1344
Harris, D. Lee, characteristics of hurricane storm surge	13131
Harris, Jack E., finned-vehicle attitude control system, analytical study	7266
Harris, James W., Jr., smaller communities program in Fulton County, Ark.	2175

# INDEX 1963

	Entry		Entry
Harris, Ronald J.: nuclear vehicle for escape and planetary missions.....	12849	Harvesting: cotton, mechanically harvested, how producers can preserve quality.....	11485
errata.....	19908	differential of cotton.....	1630
trajectory simulation applicable to stability and control studies of large multi-engine vehicles.....	18148	mechanical, and ribboning of ramie fiber.....	4373
Harris, W. D., analytic aerotriangulation.....	1956	small fruits, terminal velocities.....	20264
Harris County, Tex., land conveyance to Texas for historic monu- ment use, etc., report.....	11952	Harvesting machinery, combine cut- ting and feeding mechanisms in Southeast.....	4374
Harrisburg, Pa., Harrisburg State Airport, weather observations, hourly, decennial census.....	13125	Harvey, C. A.: measurement of state vector.....	1316
Harrison, Edwin F., static stability tests in Langley 24-inch hyper- sonic arc tunnel on blunted cone at Mach no. of 20.....	1301	modes of control.....	1315
Harrison, Gordon F., Senate manual containing standing rules, or- ders, laws, and resolutions affecting business of Senate, etc.....	9953	Harvey, John M.: ripening of early-season Bartlett pears shipped at various trans- it temperatures, 1962 sea- son.....	13145
Harrison, J. E., geology of Clark Fork quadrangle, Idaho-Mont.....	17523	transit times and temperatures of transcontinental cut-flower shipments.....	5833
Harrisonville and Ivy Landing drain- age and levee district: drainage improvement, engineer report— departmental edition.....	419	Harvey, Louis V., natural gas.....	1227
document edition.....	261	Harvey, O. L., anvil and plow, his- tory of Labor Dept.....	7134
Harrold, Lloyd L., water intake by soil, etc.....	14877	Hasel, Lowell E., static pressures and boundary-layer character- istics on forward parts of 9 fuselages, etc.....	5533
Harry, David P., III, formulation and digital coding of hydrogen properties for application to heat transfer, etc., computa- tions.....	12854	Hassell, James L., Jr., low-subsonic stability and control character- istics of 0.34-scale free-flying model modified half-cone re- entry vehicle.....	14545
Hart, George: leaf fall, humus depth, and soil frost in northern hardwood forest.....	6490	Hastings, Earl L., Tallahatta diatomite, Ala.....	16341
some relationships among air, snow, and soil temperatures and soil frost.....	10234	Hatch, Winslow R., what standards do we raise.....	17383
Hart, Virginia S., manpower train- ing in Navajo land.....	12067	Hatch political activities act, see Politics.....	
Harteck, Paul, photochemical prob- lems of Venus atmosphere.....	14591	Hatcherlea, see Chickens—Fish and fisheries—Poultry—Salmon— Shellfish—Turkeys.....	
Hartenstein, Raymond G., mechanical impedance study of X-259 rocket motor.....	14549	Hats, uniform rate of duty for head- wear of fiber of carludovica palmata (Panama) and ramie.....	13565
Hartford, Conn.: Bradley Field, weather observation, hourly, decennial census.....	11389	Hatteras Inlet Channel: navigation improvements, engineer report— departmental edition.....	458
consumer expenditures and income, 1961.....	19790	document edition.....	228
supplement.....	19791	Hatters' fur, see Fur.....	
Hartkopf, Stewart E., BAK-6/F-27A aircraft arresting barrier ab- sorber evaluation.....	16773	Hatton, T. T., fruit weights and cor- responding diameters for Florida avocados.....	18331
Hartman, William J., mutual inter- ference between surface and satellite communication sys- tems.....	16421	Hauch, Charles C., current situation in Latin American education.....	17364
Hartstack, Albert W., Jr., fiber length determination of cotton by electrical resistance measurements.....	7573	Haupt, H. F.: determining downward movement of seed on road fills.....	13985
Hartt, Barbara H.: basic data on economy of Cyprus, economic developments in Tur- key, 1962.....	8393	effect of severe rainstorms on in- sloped and outloped roads.....	10231
Hartwell, John W.: diatomite.....	14495	Hausa language, Foreign Service In- stitute, basic course.....	14707
gem stones.....	18072	Hauser, Philip M., presentation on population of world.....	296
iron oxide pigments.....	18078	Havas, Nick: combining kinds of retailer pro- motions, effect on sale of selected food products.....	355
perlite.....	18087	paper, May 27, 1963.....	15414
pumice.....	18091	pilot food stamp program, its effect on retail food store sales in Fayette County, Pa., and Mc- Dowell County, W. Va.....	8145
vermiculite.....	18113	Havas Lake National Wildlife Refuge, birds.....	4959
		Haverhill, Mass.: occupational wage survey— departmental edition.....	16288
		document edition.....	15179
		Havill, C. Dewey, emergency mid- course navigation procedure for space vehicle returning from moon.....	7291A

# JANUARY-DECEMBER

	Entry		Entry
Hawaii:		Hawthornthwaite, R. M., stress effect	11517
air transportation, local service in		Hazard, John W.:	
retrospect and prospect (address)	20372	forest statistics	
airmen's guide	3447	Chelan and Douglas Counties,	
annual survey of manufactures,		Wash., 1959-60	15587
1961, standard metropolitan		northeast Washington	15586
statistical areas, and large		Hazardous occupations, see Occupa-	
industrial counties, statistics	5989	tions.	
census of population, 1960, char-		Hazardous substances:	
acteristics	13275	labeling act, notices of judgment	17469
certification and operations rules		petroleum products, how to comply	
for certified route air carriers,		with Federal hazardous sub-	
civil air regulations amend-		stances labeling act	6473
ments	6392,	transportation of dangerous ar-	
8214-15, 10107,	17419	ticles, etc., Federal aviation	
claim to land or property within		regulations	13901
State, adjudicate, report	20589	Hazards in using liquid hydrogen in	
climatological data	3517	bubble chambers	20966
coast pilot, supplement	6038	Haseltine Corporation, provisional	
county business patterns, activi-		payments of Haseltine Elec-	
ties covered by OASDI pro-		tronics Division under Navy	
gram	15055	contract, GAO review	2330
errata	1678	Hazen, Scott W., statistical analysis	
FHA district, minimum property,		of churn-drill and diamond-	
requirements for 1 or 2 living		drill sample data from San	
units	12111	Manuel copper mine, Ariz.	18093
fisheries, annual summary		Headaches, effects on tonsus of intra-	
1961	6450	cranial arteries of certain phar-	
1962	19224	macological agents used	9195
forest plants, common native, etc.,		Headliner series	4597
check list	12161	Headsets, relation of earphone trans-	
forest products harvested, 1958 and		luent response to measurements	
1960	10224	of onset-duration	16868
hospitalization of veterans, hear-		Healing time for pruning wounds in	
ing	8126	red pine plantation	15571
lights and fog signals, list, change,	5632	Health:	
mineral industry, minerals yearbook		Belorussian SSR, translations	6941
chapter	19848	care for the aging, estimated expen-	
oceanographic and biological data,		ditures, 1960-61	11409
Hawaiian waters, Jan.-July		community participation in medical	
1961	557	self-help training program	21089
participate in Pacific Marine Fish-		community services, bibliography	11230
eries Commission compact,		construction of research facilities,	
hearings	4757	1962 funds	11109
precipitation, probable maximum	16667	cooperative program, agreement	
principal electric facilities, maps	523,	with El Salvador	11327
	2266	effect of discharges from motor ve-	
public school finance program,		hicle exhausts, Surgeon Gen-	
1962-63	19113	eral to study, hearings	11907
rainfall frequency atlas	1593	effects from repeated exposures to	
secondary nonferrous metals indus-		low concentrations of air pol-	
try, data	5471	lutants	3283
soils, water storage capacities under			
4 different land uses	17484		
tide tables, 1964	6040		
timber production, opportunities	2313		
transportation home of remains of			
Federal employees, report	17282		
waterborne commerce, 1962	19150		
wildlands, watershed management			
research, program	12164		
ZIP code directory	20035		
Hawaii Housing Authority, payment			
in lieu of taxes to city and			
county of Honolulu, report	6234		
Hawaii Volcanoes National Park, gen-			
eral information	16434		
Hawaiian Islands, see Hawaii.			
Hawaiian Islands National Wildlife			
Refuge, general information	6462		
Hawk, C. O., flash irradiation of coal	14523		
Hawkes, Glenn R., absolute identifica-			
tions of cutaneous stimuli vary-			
ing in both intensity level and			
duration	4502		
Hawkfishes, family Cirrhitidae, re-			
view	12916		
Hawkins, Murphy E.:			
analyses of brines from oil-produc-			
tive formations			
Mississippi and Alabama	5493		
south Arkansas and north Loui-			
siana	18099		

# INDEX 1963

	Entry
Health—Continued	
engineer in American Indian health program	11232
environmental activities in Public Health Service	12989
environmental factors, nursing homes	12990-13019
environmental health series, radiological health	3279, 9338, 12990, 20093
examination survey, and your child	9362
expenditures, public and private—1928-63	20136
1961-63	3330
facilities, areawide planning procedures, guide	20101
fakes and swindles, FDA catalog	19248
fallout shelters, guidelines for care of—	
infants and children	11642
newborn infants and mothers	11643
Federal surplus personal property, acquisition	6570
goals for community services, planning	19333
hazards and toxicity of plastics, bibliography	847
health economics series	5685, 14663
health information leaflets and pamphlets, list	20105
health information series	1406, 3284, 9341-42, 11234-235, 12993-994, 16501-505, 18285-286, 20097-100, 21082
health manpower source book	1407, 11238, 12995
health mobilization series	21083
health professions educational assistance act of 1963—	
hearings	6199, 17326
law	18776
reports	6180, 7945, 17283
summary	10335
Hungary, statistical data on situation, 1961	2888
Indians—	
free medical services to individuals able to pay, GAO report	12206
Public Health Service program—review, hearings	15314
indicators	3765
Industrial workers, publications list	12980
information for travel to U.S.A.—	
French edition	7397
German edition	7407
Italian edition	7396
Japanese edition	7399
Portuguese edition	7410
Spanish edition	7400
maternal and child health, increase services—	
law	20437
reports	15275, 17118, 19017
medical and health related sciences, thesaurus	12998
national survey	7408
California, methodology	13024
origin, program and operations	18294
statistics	5686-89, 7402
new directions, current and emerging issues, background papers	15622
occupational—	
national health survey findings	9344
services for employees, guide for State and local governments	18287
periodic examinations, abstracts from literature	13020
personal expenditures, measurement	14674
program, Message from the President	4724

	Entry
Health—Continued	
public—	
air pollution hazard	3272
Bulgaria, organization of services	5209
code of Federal regulations	4923
Indian dental services, presentations to Council of Federal Dental Services	9349
motor vehicles and air pollution—plans for visiting professionals from foreign countries	1413
professional personnel, increase opportunities for training—	
hearings	6199, 17326
law	18776
law, summary	19335
reports	6180, 7945, 17283
public health bibliography series	1429, 16517, 18292, 20110, 21093
public health engineering abstracts	4114
public health monograph series	13024
public health reports	4115
Public Health Service grants, etc., 1962 funds—	
health services, formula and project	9229
mental health training	9228
research	9227
research, construction of cancer research facilities, etc.	11109
training grants, traineeships, fellowships, etc.	21034
Public Health Service grants, etc., 1963 funds—	
construction of health research, hospital and medical facilities	21036
research	21033
research grant programs, guide for applicants	16426
State salary ranges	616, 10305, 19340
Surgeon General's conference on health communications, Nov. 5-8, 1962	9358
training, national conference, report	21090
publications, price list	14654
radiological data, monthly report	4132
radiological, dental, summary of State activities	9357
radiological, Public Health Service activities, highlights, 1958-62	12996
recent translations, selected list—related research, foundation expenditures, 1960	11110
research facilities program—construction, GAO review	3178
summary of activities, Surgeon General's report	2326
research, Federal expenditures, 1947-64	13457
research laboratory and clinical technicians, NIH, examination announcement	19970
research, medical technologists, NIH, examination announcement	13330
research projects supported by PHS, 1951-62	15114
respiratory, relationship to air pollution	16535
Russian SFSR, Presidium of Scientific Medical Council of Ministry of Health, actions taken, etc.	1415
science, technology and development in less developed areas	2461
services for families living in public housing community	5096
services, research relating to children, studies in progress	10339
	176, 11647



# JANUARY-DECEMBER

entry

3272

5200

1923

349

413

022

326

776

335

283

129

093

114

1024

115

229

228

227

09

34

36

33

26

40

58

00

34

32

57

06

10

78

26

57

0

0

4

5

5

1

3

0

2

## Entry

Health—Continued	
socialist countries, conference of ministers, USSR	2901
Socialist Cuba, public health statistics—	2627
data evaluation and methods research	14673-674, 16537
data from national health survey	14675-676, 16538, 20112
organization, etc., of National Center	21092
programs and collection procedures	18296
U.S., facts of life and death	20094
use for genetic and radiation studies	1431
studies of human populations, bibliography	1429
supervisor development program, basic course	4448
supporting tissues in complete denture construction	11145
travel information—	
Africa, including Malagasy Republic and neighboring islands	16497
Asia, etc., Australia, and New Zealand	16498
Europe	16499
hints for travelers abroad	16534
Mexico, Central and South America, and Caribbean	16500
trends	19334
USSR—	
progress, etc.	2639
providing public dispensary services for all, study	17944
public health and medical activities	12306
translations from Soviet public health, USSR	689
translations from Sovetskoye zdorovokraneniye	6643
voluntary health and welfare agencies, fund-raising within Federal services, manual	11666
change	20382
workers, capitalist countries, deterioration due to automation of production, USSR study	5400
see also Mental health.	
Health and Safety Laboratory, AEC fallout program, quarterly summary reports, 4479, 9680	14985
Health boards and departments: glass door accidents, survey made in 16 communities, Jan.-June, 1963	21084
nursing home programs	13019
State and local, research projects supported by PHS, 1951-62	16535
State and territorial health authorities, directory 1963	14659
Health centers, International Ladies' Garment Workers' Union anniversary medal, report	18848
Health, Education, and Welfare Department:	
air pollution prevention and control activities—	
hearings	17330
reports	13609, 13619
appropriations, 1964	
hearings	7982, 9923-24, 15373
law	20425
reports	9874, 15356, 18855
budget, 1964—	
amendment	11919
decrease, proposal	7864
directory, field	14039
grants-in-aid and other financial assistance programs administered	17537
grants-in-aid to States, etc., actual, 1961-62, estimated 1963, poster	10303

## Entry

Health, Education, etc.—Continued	
handbook on programs	17538
mental retardation activities	19337
mental retardation program, 1964	6571
new directions, papers commemorating 10th anniversary	15622
press releases	4058
programs for senior citizens in 1962	2360
report, 1962	10302
10th anniversary, chronology of growth	12239
Health, education, and welfare trends	19834
Health insurance:	
Blue Cross and Blue Shield plans, enrollment, 1962	16563
Federal employees—	
additional choice of plans—	
hearings	8005, 10022
law	13433
reports	7951, 11994
amend act to extend benefits to temporary D.C. teachers—	
hearing	11910
report	11841
benefits act, amendments, hearings	15401, 17179
Federal personnel manual, supp.	15110
Government contribution, increase, hearing	15401
overinsurance, etc., need of CSC to curtail, GAO report	12207
transfer funds from administrative expenses, amend act of 1959—	
hearing	17178
report	18867
Independent plans, 1961	21114
Independent plans, 1962	14698
retired Federal employees, administrative expenses, amend act of 1960—	
hearing	9945
report	7952
State employees' benefit programs	14663
Yugoslav regulations on obtaining benefits abroad	16194
Health officers:	
nonmedical, licensing in New Jersey, State and local experiences	3294
State and territorial conference, 1962, with Surgeon General, PHS, and chief, Children's Bureau, proceedings	18290
Health Organization, World, see World Health Organization.	
Health physics, see Physics.	
Health resorts:	
USSR—	
general information	15788
Miskhor, Korels, Gaspra, guide	12488
Health Statistics, National Center, see National Center for Health Statistics.	
Heare, Gertrude, economic developments in Brazil, 1962	8407
Hearing:	
Air Force pilots, 1955-62	4417
problems, early detection to conservation	12988
speech discrimination scores, prediction	4423
speech discrimination test	7634
see also Deaf.	
Hearings:	
calendars, Federal Communications Commission	3646
congressional committee, index, Jan. 7, 1959-Jan. 3, 1963, supp.	13387
how to conduct, employee relations hearings guide	6574

Do not order from index; see indicated entry

Page 311



# INDEX 1963

	Entry
Hearn, Jackson B., basic data on economy of Nepal.....	15647
Heart:	
cardiac excitability investigation, techniques, USSR study.....	19447
electrical activity, influence of high altitudes.....	71
heart research news (periodical).....	3766
heart research news, NIH film, information booklet.....	19963
mitral lesions, significance of phono-, vector- and ballistocardiography, USSR study.....	2968
thermoregulation and cardiopulmonary function, effect of induced hypoxia.....	11495
see also Ballistocardiography.	
Heart diseases:	
and drugs, review of research grants by National Heart Institute.....	19961-962
congestive heart failure—guide for patient management, outline for health agency personnel.....	20098
diagnosing by special methods, USSR study.....	16536
dietary factors.....	2668
endocarditis, bibliography, 1957-62.....	18285
smoking in relation to heart disease, research grants, National Heart Institute, 1949-62.....	21081
triad of Fallot, clinical picture, diagnosis, and surgical treatment, USSR.....	18197
Hearth, Donald P., thrust, etc., of ejector-type exhaust nozzles.....	16155
Heat:	
catecholamine excretion in heat-acclimatized men.....	5516
electron temperatures in ionosphere.....	9634
high-temperature content—vanadium silicide.....	19892
sesquioxides of erbium, holmium, thulium, and ytterbium.....	12837
sesquioxides of lutetium, dysprosium, and cerium.....	5501
nuclear, for solid-fuel gasification.....	14513
reduction temperature of metals and heat resistance of alloys, USSR study.....	11565
resistance of hydras and their cells, effect of maintenance temperature, USSR study.....	10432
resistance of organism, significance of adrenal glands.....	14184
resisting materials, collection of USSR works.....	5142
thermal balance, maintaining in man.....	5325
weld affected zones in titanium-6Al-6V-2Sn alloy, study.....	11496
see also Heat transfer—Insulation.	9318
Heat capacity:	
low temperature heat capacities and entropies at 298.15° K of monomolybdates of sodium, magnesium, and calcium.....	3101
and entropies at 298.15° K of sodium dimolybdate and sodium ditungstate.....	9125
and entropy at 298.15° of muscovite.....	16347
and high-temperature content of mullite.....	19860
sesquioxides of scandium and cerium.....	14511

	Entry
Heat exchangers:	
Langley 11-inch ceramic-heated tunnel, design, operation, etc., tubes, mechanized brazing, USSR study.....	5594
Heat of formation:	
barium oxide and strontium oxide.....	17676
calcium tungstate, calcium molybdate and magnesium molybdate.....	5497
crystalline hydrates of ferrous sulfate.....	3098
gehlenite and talc.....	16332
vanadates of lead and manganese.....	14516
vanadium nitride and vanadium carbide.....	9126
Heat of solution, cerium metal in hydrochloric acid.....	7214
Heat of vaporization, correlation of dissociation energies of gaseous molecules and heats of vaporization of solids, homonuclear diatomic molecules.....	8100
Heat transfer:	
aerodynamics, measurements on flat-face cylinder at Mach number range of 2.49 to 4.44.....	9638
base, Saturn model.....	5354
bell-shaped nozzle with upstream flow disturbances, experimental compared to predicted.....	11021
blunt axially symmetric bodies.....	16371
blunt conical bodies having cavities to promote separation.....	7240
characteristics of several finned-tube configurations.....	14590
component in vacuum sublimation, radiant heat effect.....	1279
convective, in nuclear rocket nozzle.....	18179
critical heat flux and flow pattern, characteristics of high pressure boiling water in forced convection.....	18141
data on irradiation of Santowax OMP in M.I.T. in-loop reactor—equipment design, etc., summary.....	122
dissociating hydrogen, calculation, errata.....	4483
distributions at Mach nos. 6.0 and 9.6 over 2 reentry configurations for 5th-stage Scout vehicle.....	4482
effect of multi-g accelerations on nucleate-boiling ebullition.....	7244
empirical correlation of critical boiling heat flux for channels of various cross sections and orientation.....	11066
energy budget at earth's surface.....	11017
flat-faced conical nose, measurements at Mach nos. to 14.6.....	14548
free-flight investigation at supersonic speeds of 2 slender cone-cylinder bodies at angle of attack of 5° with one body rotating.....	16756-757
heat exchange, patent classification.....	14535
hemisphere-cylinder and bluff-afterbody model in methane-air combustion products and in air.....	1382
hydrocooled peaches, thermal characteristics.....	1299
hydrogen, formulation and digital coding.....	18447
in radiating fins, effect of variable thermal properties.....	12854
	19915

	Entry		Entry
Heat transfer—Continued		Heaters, see Unit heaters—Water heaters.	
laminar, boundary layer similar solutions and correlation equations for distribution in equilibrium air at velocities up to 41,100 ft. per second	19943	Heath, Atwood R., wind tunnel investigation of wing loads due to deflected inboard ailerons on sweptback wing at transonic speed	3108
laminar flows of incompressible fluids	5577	Heating:	
large-amplitude oscillations effect on	5615	emergency construction, design, engineering manual	6372
measurements—		spontaneous, of coal, effects of hydraulic fluids	10954
attached protuberances in supersonic turbulent boundary layer at Mach numbers 2.65, 3.51, and 4.44	3124	see also Aerodynamic heating.	
bodies of revolution in free flight by use of catcher calorimeter	14574	Heating apparatus and supplies:	
flat face of blunted 10° half-cone body (semidisk)	11028	current industrial reports	3574, 9717
flat-plate surface for range of Mach numbers and boundary layer thicknesses	3124	equipment, Federal item identification guides for supply cataloging, supplements	3655
two wing-body combinations	7233	see also names of special apparatus and supplies.	
prediction of critical heat flux in forced convection flow	14976	Heating degree days, see Temperature.	
pressure level effect on afterburner-wall temperature	5527	Hecalds, catalogue	16715
radiating fin profiles, USSR articles	5386	Hecht, Reuben W., labor used to produce livestock, etc.	18444
rates, improve with use of acoustic vibrations and reduce scaling in distillation units used for saline water conversion	623	Hedges, Irwin R., European Common Market and U.S. agriculture	565
reactor hot channel factors and burnout, literature search	5944	Heffernan, Robert E., apple storage and packing facilities for southern Illinois	13176
recombination, effect of Tesla discharge	3151	Heflin, Leo G., fresh fruit and vegetable prices, 1962	11466
regions of separated and reattached flows	10980	Hegarty, Daniel M., sighting problem associated with sextant-type measurements for space navigation, effect of field of view on star field identification	9165
relationships among coefficients of turbulent moment, heat, and matter transfer in atmosphere	5158	Heid, Walter G., jr., changes in market structure of breakfast foods industry	16749
solid-in-gas suspensions as heat transport mediums	14520	Heldbreder, Elizabeth, basic library reference sources for business use	3325
solid surfaces to cryogenic fluids, literature survey	9210	Heldmann, L. J., heavy pruning reduces growth of southwestern ponderosa pine	17489
sphere with retrorocket exhausting into free stream	1310	Heldmann, Marcus F., gas flow transients effect on heat release of burning liquid drops in rocket combustor	9153
steady-state, stagnation-point, heat-transfer-rate measuring device	11045	injection processes for 15-percent fluorine-85-percent oxygen and heptane in 200 pound-thrust rocket engine	5524
subcooled boiling, under forced convection in heated tube	9156	Heim, Richard H., personal affairs and investment, PACAF basic bibliographies for base libraries	5880
surface, ablating materials ability to reduce, investigation	11019	Heindl, L. A.: Cenozoic geology in Mammoth area, Pinal County, Ariz.	8332
thermal calculation of pressurized water power reactor, USSR study	14299	geology and ground water conditions, Gila Bend Indian Reservation	6567
thermal conductivity—		Heinstein, Martin I., influence of breast feeding on children's behavior	15094
gas, pressure effects	18243	Heising, Leonard F., open-pit iron mining, milling, and costs, Groveland Mine, etc.	14501
gases at high temperatures	19945	HEL, see Human Engineering Laboratories.	
vacuum gage calibration in range of 10 <sup>-4</sup> to 1 Torr lower limits	12865	Helicopters:	
ventilated snow	19133	certification and operation rules, civil aeronautics manual, supp	10105
transfer temperature gradients effect for laminar flow of gases through heated channels	15011	H-21—	
turbulent, coefficients associated with sinusoidal protuberances on flat plate at Mach no. 3	9161	litter-patient installation, dynamic crash test	13098
visual study of 2-phase flow in vertical tube with heat addition	5586	seat installation, dynamic test	18351
water-film cooling of 80° total-angle cone at Mach number of 2 for airstream total temperatures up to 3,000° R	21000	H-21C, HU-1A, and H-34C equipped with XM-153 armament kit, flight evaluation	1741
with laminar flow in concentric annuli	18158		
Heat treatment, welded joints of 1Kh18N9T steel, with high frequency current, influence on corrosion, USSR study	5241		

# INDEX 1963

	Entry		Entry
<b>Helicopters—Continued</b>		<b>Hellum—Continued</b>	
H-23B accident, Corpus Christi, Tex., crash injury investigation report.....	20203	oxygen-hydrogen-hellum mixtures, combustion tests at loading pressures up to 8,000 pounds per square inch.....	19018
H-43B, category 2 performance tests.....	14902	procurement by Mines Bureau under negotiated fixed-price contracts, GAO examination.....	2323
high-performance program, phase 1, summary report.....	21142	real gas, extension of hypersonic flow parameters.....	9164
HU-1, weapon system flight evaluation.....	14903	release and swelling in irradiated borides.....	14972
HU-1b, equipped with rocket weapon system, flight test evaluation.....	11482	vapor-liquid equilibria for helium-nitrogen-methane system.....	7215
IFR capability, mechanical stability and trim augmentation, investigation.....	13100	wind tunnels, flow visualization techniques.....	9183
jet-flap rotor, flutter characteristics in hovering and forward flight.....	14752	<b>Hellum flow, see Flow.</b>	
medium-weight, utility, wind-tunnel tests at forward speeds.....	12886	<b>Hellum ions, layer, thickness.....</b>	7286
noise, origin and means of reducing plastic canopies, reduction of reflectivity from transparent materials, techniques evaluation.....	3383	<b>Helme, William H. : new classification techniques.....</b>	4465
rotor-blade tip vortex, effect on blade airloads.....	2118	tests to predict success in Army clerk course.....	14948
rotor having airfoil section designed for utility type, hovering characteristics.....	11032	<b>Helminthology, see Worms.</b>	
Soviet, news.....	1307	<b>Helms, H. H., jr., aluminum-iron magnetic alloys, etc.....</b>	12958
tandem-rotor configurations, performance, blade motions, and blade air loads measurements.....	5212	<b>Help prevent loss and damage.....</b>	7480
UH-1A, second harmonic feathering device.....	19931	<b>Helping people to help themselves in country and in towns.....</b>	4332
UH-1B/AN/ASW-12V automatic flight control system, flight evaluation.....	16632	<b>Helping rural youth choose careers.....</b>	14875
universal transmission test stand.....	13200	<b>Helsinki, Finland : World Youth Festival, 1962—</b>	
wind-tunnel tests of full-scale fuselages, errata.....	7481	Communist activities, hearings, publication, print additional copies, report.....	2065
YH-41 stability and control re-evaluation.....	16631	<b>Hem, John D., chemical equilibria and rates of manganese oxidation.....</b>	11856
YH-41 stability and control re-evaluation.....	7256	<b>Hematite, ores, flotation, northeast Birmingham, Ala.....</b>	8354
YHU-1B category II performance tests.....	20304	<b>Hemato-encephalic barrier, permeability to inorganic phosphate in acute radiation sickness, USSR study.....</b>	3081
YHU-1D, extreme temperature tests in Climatic Laboratory, category 2 evaluation.....	5856	<b>Hematology, see Blood.</b>	
YUH-1D, adverse weather tests.....	11476	<b>Hemiptera, stinkbug Eurygaster integriceps Put., tagging with radioactive isotopes.....</b>	20920
<b>Heliothis virescens, see Tobacco budworms.</b>	16767	<b>Hemisphere, Northern : daily synoptic weather maps.....</b>	3579-80
<b>Heliports :</b>		weather maps, for IGY.....	20244
planning, site selection, and design in theater of operations, technical manual.....	20328	<b>Hemisphere, Southern : sky survey payload.....</b>	7290
rigid and overlay pavement, engineering and design manual.....	4862	Soviet cataloging of faint stars.....	12352
changes.....	428-429	<b>Hemisphere, Western : agricultural situation, 1963.....</b>	8156
<b>Hellum :</b>		Canadian and Mexican population trends.....	11909
computing volume in cylindrical steel containers.....	16825	Caribbean demographic position.....	13663
concentrations downstream of vent exhausting helium at sonic velocity into supersonic stream.....	11063	Castro-Communist subversion in Western Hemisphere—	
film cooling on hemisphere at Mach no. of 10.....	1311	hearings.....	6194
high-temperature centrifugal compressor, performance characteristics.....	16342	reports.....	6195, 7956
low-temperature phase equilibria of helium-bearing natural gases—		<b>Central and South American population growth.....</b>	13663
Hansford gas.....	3099	communist subversion (statement).....	7435
Hogsback gas.....	18096	<b>Hemlock : mountain—</b>	
minerals yearbook chapter.....	12823	bibliography with abstracts.....	10223
nitrogen mixtures, supercompressibility factors.....	9123	silvical characteristics.....	12160
nuclei, in 1960 solar cosmic ray event.....	11051	strength and related properties.....	20706
		northern hardwood merchantable stands, porcupine winter feeding activity.....	15563
		<b>Hemlock Experimental Forest, guide.....</b>	19252
		<b>Hemodynamics, see Blood.</b>	
		<b>Hemoglobin, physico-chemical and biochemical properties, changes during radiation sickness.....</b>	2462
		<b>Hemolysis and hemolysins, thiol poisons, hemolytic action, USSR study.....</b>	837
		<b>Hemopoleis, see Blood.</b>	

	Entry
Hemotransfusion reactions and complications, caused by transfusion of bacteria-contaminated blood, their prophylaxis and therapy, USSR-----	10854
Hempding, Gerald L.: arctic meteorology photo probe polarized light experiment-----	16364
scanning mechanism for satellite-borne X-ray spectrometer-----	1271
Henderson, Harry W., terms used in international agricultural trade-----	20692
Henderson, John M., controlled environment facilities, survey-----	16526
Henderson, William P., pressure distributions over forward portion of Project Fire space-vehicle configuration-----	7269
Henderson, Nev.: convey land to-----	15152
law reports-----	11803, 13760
Hendricks, Paul: small business development in New Hampshire-----	1465
vacation-travel businesses in New Hampshire-----	1485
Hendricks, Robert C., evaluation of injector principles in 2400-pound-thrust rocket engine using liquid oxygen and liquid ammonia-----	10987
Hendrickson, B. H.: conservation methods for soils of southern Piedmont-----	11450
runoff and erosion control studies on Cecil soil in southern Piedmont-----	7584
Hendrickson, Clendon L., Project Rough Road Alpha-----	11484
Hendrickson, E. R., panel presentation, Dec. 11, 1962-----	1421
Hendry County, Fla.: west, central and southern Florida project engineer report-----	12085
departmental edition-----	11755
Hennig, Charles E., petroleum refineries in U.S., Jan. 1, 1963-----	14506
Hennigan, T. J., use of sealed silver-cadmium battery on Explorer XII-----	3145
Hennings, John F.: addresses, etc.-- Dec. 4, 1962-----	3012
Apr. 1, 1963-----	9029
Sept. 27, 1963-----	19779
Oct. 19, 1963-----	19780
nomination, hearing-----	2103
Hennings, Glen, low-temperature chemical starting of 200-pound-thrust JP-4, nitric acid rocket, etc-----	5517
Henle, T. A., reaction rate of titanium and titanium subchlorides in molten sodium chloride-----	5489
Henrietta Town, N.Y., population, special census-----	18695
Henriksen, S. W., application of occultations to geodesy-----	20649
Henry, E. William: addresses-- Dec. 13, 1962-----	2253
Jan. 24, 1963-----	4885
May 3, 1963-----	12097
Henry, John R., subsonic-diffuser data-----	16360
Henry, Robert M., statistical model for synthetic wind profiles for aerospace vehicle, etc-----	14559
Henson, Paul A., crownvetch, soil conserving legume and potential pasture and hay plant-----	11436

	Entry
Hepatitis: description, etc-----	9341
infectious, Botkin's disease in children, USSR conference-----	19474
Hepatotoxicity, acute, carbon tetrachloride, current aspects-----	7628
Heptane, injection processes for 15-percent fluorine-85-percent oxygen and heptane in 200-pound thrust rocket engine-----	5524
Heptanoic acid: import duties, suspension, continue-----	17023
law reports-----	13550, 15350
Herald of Academy of Medical Sciences (USSR periodical): translations-----	2590, 6794, 6994, 8511, 10643, 10675, 12682, 16224, 17768, 19530, 20818
Herald of Academy of Sciences (USSR periodical): translations-----	8847, 12373
Herald of communications (USSR periodical): translations-----	2651, 6700, 7110, 8690, 10746, 12443, 12673, 14173, 17951, 19547, 19660
Herald of roentgenology and radiology (USSR periodical): translations-----	6642
Herald of surgery (USSR periodical): translations-----	2463
Herald of surgery imeni I. I. Grekov (USSR periodical): translations-----	1054, 10613
Herbarium, see National Herbarium.	
Herber, Elmer C., correspondence between Spencer F. Baird and Louis Agassiz-----	14691
Herbert Hoover Library, general information-----	12891
Herbicides: aquatic, data-----	1680
controlling lawn weeds-----	18427
minimize injurious effects, hearings-----	15324
precision placement incotton rows by use of combination planter and sprayer assembly-----	18400
see also Phenoxy herbicides.	
Herdsmen, Tibet, Na-mu Lake area, improved living conditions-----	2546
Heredity: characteristics, effect of environmental conditions, USSR study-----	12331
hereditary information, analysis of structure, USSR study-----	19390
inheritance of branch length in young loblolly pine progeny-----	12181
see also Micro-organisms.	
Herget, Paul, rectangular coordinates of Ceres, Pallas, Juno, Vesta, 1960-80-----	7344
Heritage of freedom, facts for Armed Forces-----	7659
Herman, Cella I., economic developments in India, 1962-----	8394
Hermann, F. J., revision of genus Glycine and immediate allies-----	1729
Hernandez, G. J., Rayleigh's data on airglow emission-----	16771
Heroux, Leon, proportional counter spectrometer for solar X-rays-----	7618
Herrick, Joseph F., jr., automatic pallet-box filler for apples-----	34
Hersh, Donald M., soil survey of York County, Pa-----	16564
Herter, Christian A., nomination, hearing-----	4776
Herud, Eric, television multiple insertion techniques-----	3217



# INDEX 1963

Entry	Entry
Hervey, John G., Federal textbook on citizenship, our Constitution and Government..... 621	Higgins, E. Eugene—Continued
15630	college and university, ratio of equipment investment to building investment..... 17392
Hersog, R. F. K., determination of atmospheric parameters by use of rocket-borne mass spectrometers..... 18123	non-residential buildings, by facilities category..... 12064
Hess, Joseph, parachute descent times and impact locations for high altitude balloon payloads..... 18455	High Energy Accelerator Physics Panel, see Panel on High Energy Accelerator Physics.
Hess, Wilnot N.: artificial radiation belt made on July 9, 1962, characteristics, status report..... 9171	High school students, see Students.
energetic particles in inner Van Allen belt..... 16373	High schools: aviation, hierarchical factors in course grades..... 4407
energy spectrum of electrons in outer radiation belt..... 7289	dropouts, 20th century tragedy..... 17378
neutrons in space..... 5608	enrollment, teachers, and school-housing, fall 1962, statistics..... 10070
Hester, Frank J., bathykmograph..... 6469	foreign language teachers, source materials..... 2169
Heterosis, nature and methods of utilization in plant selection, USSR study..... 8692	addendum..... 8157
Hetzler, F. J., sodium mass transfer, metallurgy screening test data and analysis..... 14971	general usage facilities and equipment, selected references..... 12080
Heung, Hom Bok, see Hom Wah Yook.	graduates, Federal Government should guarantee opportunity for higher education to all, 1963-64 national college debate topic..... 20456
Hevelius, LAC 66 lunar chart..... 13210	print as House document, reports..... 17123, 17291
HEW, see Health, Education, and Welfare Department.	nonpublic— directory 1960-61..... 4820
Hewes, Laurence I., Jr., outdoor recreation and megalopolis needs of New York-New Jersey-Philadelphia region..... 7382	enrollment, etc., statistics, 1960-61..... 15448
Hewlett, Richard F.: computer program for computing grade and tonnage of ore, etc., computing ore reserves by triangular method using medium-size digital computer..... 7213	offerings and enrollments in grades 9-12, 1961-62..... 15438
design, etc., mathematical models for mine-systems analysis..... 5485	public— science and mathematics teachers, basic information..... 17393
Hexane, extractive of tobacco, total..... 1659	staffing and constructing secondary schools, aims in education, 1959-60..... 6349
Heyburn, Idaho: releasing title, etc., of U.S. in certain streets..... 9810	science and mathematics teachers— characteristics and service loads..... 9252
law..... 6168, 8069	summer institutes, 1963..... 3198
Heyl, Allen V., oxidized zinc deposits, Utah..... 14017	survey..... 8177
Heyson, Harry H., linearized theory of wind-tunnel jet-boundary corrections and ground effect for VTOL-STOL aircraft..... 1322	students, identification and development of talent..... 19094
Heywang, Burt W., poultry management in subtropical, semiarid climate..... 1718	summer science training for high-ability secondary school students, 1963..... 3199
HHFA, see Housing and Home Finance Agency.	teachers, amend national defense education act to permit partial cancellation of student loans, report..... 20585
Hibernation: ground squirrels— Arctic, effect on retention of viral agents..... 18476	see also Junior high schools— Schools.
automatic control of circulation..... 18204	High seas, see Ocean.
changes in intestinal flora..... 11500	High seas, jurisdiction over, see Maritime law.
mammalian, control of circulation..... 11488	High temperature materials, see Refractory materials.
Hickey, David H., aerodynamic characteristics of model with fans mounted in wing..... 5602	Higher education, see Colleges and universities—Junior colleges.
Hickory, use in making picnic tables..... 17500	Highland, Ind., population, special census..... 15077
Hidalgo County, Tex.: soil bank programs, questionable participation..... 10261	Highland Park, Mich., civil rights, public schools, 1962..... 181
truck crop production practices..... 16415	Highlights in history of forest and related natural resource conservation..... 2368
Hides and skins, see Leather, hides and skins.	Highlights of developments in mental health programs, 1962..... 19965
Hierarchical factors in course grades in aviation high school..... 4407	Highlights of legislation on aging: Federal legislation affecting older persons, 87th Congress, 2d session..... 5041
Higbee, Kenneth B.: aluminum..... 19821	State legislation enacted in 1962..... 615
bauxite..... 19823	Hightower, J. V., world petroleum statistics, 1962..... 18114
Higgins, E. Eugene: assignable area of college and university buildings, etc..... 13841	Highway bridges, see Bridges.
	Highway machinery, see Road machinery.



	Entry
Highway Officials, State, American Association of, see American Association of State Highway Officials.	
Highway planning notes.	9365
Highway railroad crossings, see Railroad crossings.	
Highway safety, see Safety of life.	
Highways, see Roads and highways.	
Higley, Leo W., reclaiming 8-816 high-temperature alloy scrap.	10963
Hikes, backpacking in national forest wilderness, a family adventure.	16753
Hill, George W., remarks on his lunar theory.	7253-54
Hill, Lawrence W.: cost of converting brush cover to grass for increased water yield.	17482
San Dimas Experimental Forest.	20711
Hill, R. H., aluminum hard coating of ordnance materiel.	9317
Hill, Richard M., operating costs and ration, wholesale, bibliography.	11275
Hill, Roger L., transistorized building blocks for data instrumentation.	9213
Hill, Wilhemina: teaching about human rights.	10081
unit planning and teaching in elementary social studies.	13871
Hill-Burton program: hospital and medical facilities series under Hill-Burton program.	1408-09,
3285-88, 5690-93, 7403-5, 9343, 11237-238, 14664-667, 16506-508, 20101-104, 21085-86.	
progress report, July 1, 1947-June 30, 1962.	5690
publications, annotated bibliography.	20104
Hill-Burton project register.	3765
Hills Beach: beach erosion control study, engineer report.	420
documental edition.	272
Hillsborough River: flood control, etc., engineer report.	4866
documental edition.	4689
Hilmon, J. B., effect of burning on south Florida range.	10244
Hilo, Hawaii, General Lyman Airport, weather observations, hourly, decennial census.	7513
Hilsmeler, William F., Oak Ridge meteorological data.	7705
Hilton, David A., in-flight aerodynamic noise measurements on Scout launch vehicle.	14561
Hilton, G. S., water-resources reconnaissance in southeastern part of Honey Lake Valley, Lassen County, Calif.	8350
Himmel, L., perspectives in materials research.	11151
Hind, James F., promotional programs for winter pears, etc.	14806
Hinds, Thomas E., decay associated with Fomes ignarius sporophores in Colorado aspen.	17490
Hines, Bob, ducks at a distance.	17451
Hinshaw, Lerner B., effect of increased venous pressure on renal hemodynamics.	4503
Hired farm workers, see Farm labor.	
Hiring practices, see Employment.	
Histochemistry, index of brain neuron excitation, USSR study.	6800
Histology: changes in skin following homoplasty to burns of irradiated rabbits, USSR study.	2539

Entry	
Histology—Continued	
formaldehyde perfusion and methylene blue gross staining technic in dry fixation of lung tissue.	5889
Historians, social scientists, chart.	1186
Historic sites: preservation through urban renewal.	9473
publications, price list.	9333
see also names of historic sites.	
Historical research (Chinese periodical): translations on Genghis Khan.	8641
Historical summary of United States-Korean relations with chronology of important developments, 1834-1962.	1508
History: American— grants for documentary source material.	
hearing.	13649
reports.	15243, 18856
proceedings, 1962— departmental edition.	18528
document edition.	18900
publications, price list.	1396
American writings, 1955— departmental edition.	16813
document edition.	17058
historical handbook series.	5638, 7333
problems in history of international worker and national liberation movement, USSR.	1130
Research Analyses Office.	16782
Soviet Union, war, 1941-45, USSR review.	20815
see also Military history—Naval history—also names of departments, etc.—also subjects.	
History and Technology Museum, construction, progress report.	20509
History of mathematical statistics research at Aeronautical Research Laboratories.	4400
Hiteshue, Raymond W., hydrogasification of bituminous coals, lignite, anthracite, and char.	3083
Hitz, C. R., bottom fish survey off Oregon coast.	19228
Ho Chih Minh, speech at Nam Dinh party chapter conference, translation.	15724
Ho, Elsie K. Y., make each person count, guide for nursing home administrators.	21088
Ho, Keon Chew, relief.	6228
Hoag, Ralph L., training for teachers of deaf.	10082
Hobbles, publications, list.	3268
Hobson, Carol J.: fall 1962 statistics on enrollment, teachers, and schoolhousing, public elementary and secondary day schools.	10070
statistics of State school systems, 1960-60.	8188
Hobson, Julius W., variable annuity in retirement income.	8331
Hoc tap (North Vietnam periodical): translations.	644,
790, 2516, 2626, 5183, 5422, 6749, 6925, 7070, 8701, 8987, 12534, 12622, 15711, 15955, 17646, 17681, 17704, 17763, 19504, 19769.	
Hock, Joseph R., remarks, Jan. 18, 1963.	3050
Hockersmith, Forrest D., remarks, Apr. 3, 1963.	8421
Hodde, Walter L., Wool Department of Indiana Farm Bureau Cooperative Association, Inc.	17416

# INDEX 1963

	Entry		Entry
Hodge, B. Leon, pressure distribution of 0.0667-scale model of X-15 airplane	3116	Hog cholera—Continued	
Hodge, Carleton T., Hausa, basic course	14707	what you should know about disease	14883
Hodge, Paul W., space density of atmospheric dust in altitude range 50,000 to 90,000 feet	1496	Hog-lot equipment	13166
Hodges, Earl F.:		Hog plague, see Swine plague.	
animal units of livestock fed annually, 1909-61	4376	Hogback gas, see Gas.	
livestock production units, 1910-61	5843	Hogs, see Swine.	
Hodges, Luther H.:		Holists:	
addressee, etc.—		capstan for deep-sea equipment	16462
Oct. 16, 1962	1958	holisting vehicles, safety data for stevedoring	14449
Oct. 29, 1962	201-2	Holanda, Raymond, calibration of thermal-conductivity vacuum gage in range of 10 <sup>-4</sup> to 1 Torr by means of volume-ratio calibration system	12865
Jan. 23, 1963	4649	Holbrook, W. F., extraction of alumina from ferruginous bauxite by double-leach process	18089
Feb. 1, 1963	4650	Holding companies, act of 1935, releases, SEC	3769
Feb. 13, 1963	4653	see also Banks and banking—Public Utilities.	
Feb. 19, 1963	4645	Holding pattern criteria	4882
Feb. 25, 1963	6045-46	Holding the line, forests and pesticides	16755
Feb. 26, 1963	6055	Hole, Clifford J., world survey of civil aviation, Nordic area	5985
Mar. 7, 1963	6053	Hole, Erling, wheat growers' machinery costs, by size of farm in central North Dakota	6315
Mar. 12, 1963	6047, 6049	Holiday, R. W., iron ore	19842
Mar. 25, 1963	7808	Holidays:	
Apr. 4, 1963	7805	books useful in school programs	12059
Apr. 20, 1963	9770	investigation, authorization, report	6253
Apr. 25, 1963	9771, 9773	Holland, Thomas W., labor-management relations bibliography	12775
Apr. 29, 1963	9775	Holliday, R. W., iron ore in 1962	16327
May 1, 1963	9785	Holliday, Kans., railroad accident	10360
May 3, 1963	9777	Hollingsworth, J. P., electric insect traps for survey purposes	7543
May 7, 1963	9774	Hollingsworth, R. T., survey of large space chambers	9168
May 10, 1963	9772	Holloman, J. Herbert:	
May 16, 1963	9788	addresses, etc.—	
June 2, 1963	11682	Sept. 24, 1962	1960
June 3, 1963	11686	Nov. 2, 1962	4647
June 9, 1963	13341	Jan. 23, 1963	4648
June 11, 1963	13340	Feb. 15, 1963	4646
June 17, 1963	13342	July 22, 1963	15138
June 24, 1963	13343	Holloway, Paul F., Scout vehicle, 5th-stage, heat transfer and pressure distribution data	11066
June 25, 1963	13347	Holmes, Ann C.:	
June 29, 1963	13337	economy of Denmark	17556
July 2, 1963	13338	living conditions in Sweden	2389
July 3, 1963	13359	Holmes, George H., jr., beryllium investigation in California and Nevada, 1959-62	9114
July 22, 1963	15122	Holmes, Robert W., preparation of marine phytoplankton for microscopic examination and enumeration on molecular filters	6467
Aug. 15, 1963	16963	Holmium sesquioxide, high-temperature heat content and entropy	5501
Aug. 30, 1963	16964	Holscher, Clark E., employment outlook for range managers	20934
Sept. 2, 1963	18755	Holstein cattle, see Cattle.	
Oct. 16, 1963	18757	Holt, A. B., neutron irradiation effects of brittle-rupture properties of construction materials of reactor vessels	9690
Oct. 24, 1963	20391	Holt, T. W. & Co., relief	7878
Hodgkin's disease, symptoms and treatment	12994	Holt Import & Export Co., see Holt, T. W. & Co.	
Hodgson, J. M., ditchbank weeds control, acceleration, and its application to space trajectory analysis, research study	19899	Holt Lock and Dam:	
Hofer, Lawrence J. E.:		hydroelectric generating facilities, engineer report—	12092
effect of lead deposits on activity of automotive exhaust catalysts	14509	departmental edition	11752
X-ray powder diffraction patterns of solid hydrocarbons, etc.	20941	document edition	
Hoffman, Paul P., jr., transportation research and service activities of Bureau of Commercial Fisheries, 1961, report	10194		
Hoffman, R. A., protons and electrons at 12 earth radii during sudden commencement, Sept. 30, 1961	9175		
Hoffman, Richard L., revision of annelid worms of genus Cambriaeola	7323		
Hoffman, Sherwood, stability and drag of 79° chipped delta boost-glide configuration, etc.	18132		
Hofmann, Walter:			
floods of Dec. 1955-Jan. 1956 in far western States—			
description	15618		
streamflow data	6568		
Hog cholera:			
number 1 killer, eradication information	11440		

# JANUARY-DECEMBER

	Entry
Holton, Richard H.:	
addresses, etc.—	
Mar. 21, 1963	7806
May 21, 1963	11688
June 25, 1963	13345
Sept. 13, 1963	18759
Oct. 11, 1963	18752
nomination, hearings	8096
Holtzclaw, Ralph W., wind-tunnel investigation of devices to improve static directional stability of unswept-wing airplane model at Mach numbers from 0.8 to 2.2	10984
Holum, Kenneth, remarks, Oct. 17, 1963	19347
Holyoke, Mass., water problems	19330
Hem Wah Yook, relief	6217
Hem You Fong, see Woo You Lyn.	
Hem You Tong, see Woo You Lyn.	
Homan, Sheldon W.:	
control of electrical shock hazards—	5432
maintenance and safety	1156
safety in industry, fundamentals of accident prevention	8016
Home business, see Business.	
Home economics:	
and related fields, titles of theses completed	5838
canning and food preservation, helpful Government publications, list	11213
degree-granting colleges, etc., 1961-62, list	369
family economics review	3638
home and family living among low-income families, suggestions for improvement	10304
home and garden bulletins	26-29,
1697, 4353-54, 5820-21, 7565-67, 9571, 11452, 13167, 14858-859, 16737-741, 18423-427	
nursing home housekeeping	13014
programs, rural civil defense work	10126
publications, lists	1393, 20269
research reports	1698,
13168, 14860,	16742
Home economists, services to families with mental retardation	9732
Home loans, see Loans.	
Home making, see Home economics.	
Home of Franklin D. Roosevelt National Historic Site, general information	12925
Homemaker services, see Visiting housekeepers.	
Homemaking, see Home economics.	
Homeowners, see Homes.	
Homer, Winslow, 4-cent commemorative stamp (poster)	1385
Homes:	
air pollution and its control	1414
all-electric, annual bills	19192
ant control	5820
conditions hazardous to children, AFDC program to protect	19155
construction, maintenance, community development, publications, price list	3267
District of Columbia, repair tax incentives, hearings	20497
economical financing, today and tomorrow (address)	19171
FHA—	
estimating ability to pay, mortgage credit analysis guide	501
financing for home purchases and home improvements, guide	4894
new improvement programs	2261
homeownership of nonwhite families, 1960 census of housing, final report, announcement and order form	15033

	Entry
Homes—Continued	
insured mortgage transactions—	
FHA data for States, report	10152,
12109	
FHA trends, quarterly reports	4130
proposed homes	12108
low-cost, septic tank systems	13914
mortgage debt and financing activity	3629
mortgage insurance, FHA regulations, amendments	503-504,
4895-96, 10154, 13910, 15487, 19176-179.	
mortgage interest rates and terms	10148
mortgage programs, mortgagee's handbook, FHA manual, revision	4899, 6405
Homes (institutions), see Nursing homes.	
Homestead National Monument, general information	18206
Homesteads, act of 1862, free lands for all Americans	4632
Homewood, Ill., population, special census	15078
Homme, Lloyd E., teaching machine applications	3219
Homoplasty, burns of irradiated rabbits, histological changes in skin, USSR study	2539
Homoptera, general catalogs	1646-51,
7540, 16715	
Honaker, William C., irradiation effects of 40 and 440 Mev protons on transistors	5574
Honda, N.:	
adrenaline and noradrenaline effects on ear vessel in cold- and warm-adapted rabbits	18470
influence of ambient temperature on relation between skin temperature and blood flow in rabbit ear	14907
Honduras:	
alliance for progress programs, report on study mission	8023
print as B. doc., report	20571
furnishing defense articles and services, agreement	3361
gas appliances, household and commercial U.S. market	18615
import tariff system	2385
Honey:	
crop, production, 1962 summary	7400
market news, semimonthly report	3770
Honey bees, see Bees.	
Honey Lake Valley, water-resources reconnaissance of southeastern part	8350
Hong Kong:	
China boundary, study	20158
economic developments, 1962	8385
investment in	5061
living conditions	12254
preparing shipments to	8392
Honolulu, Hawaii:	
International Airport, aircraft accident report	16920
payment in lieu of taxes by Hawaii Housing Authority, report	6234
Honolulu Biological Laboratory, see Biological Laboratory, Honolulu.	
Honolulu County, Hawaii, payment in lieu of taxes by Hawaii Housing Authority, report	6234
Honolulu Magnetic Observatory, magnetograms and hourly values	4633
Honor, see Ethics.	
Honors courses in colleges, see Colleges and universities.	
Hood, James W.:	
saline ground water in Roswell Basin, N. Mex., 1953-59	8341

# INDEX 1963

	Entry
Hood, James W.—Continued	
saline-water resources of New Mexico	5035
water wells in Frenchman and Yucca valley, Nevada Test Site, Nye County, Nev.	130
Hook, Marion M., time required for airmen cross-training	4401
Hooker, J. R., pitch binders for graphites	14969
Hoover, Herbert, Library, see Herbert Hoover Library.	
Hoover, Linn, geology of Anlauf and Drain quadrangles, Douglas and Lane Counties, Oreg.	5015
Hoover, Marvin D., more water from mountains	14895
Hoover Commissions on Government Organisation, see Organisation of Executive Branch of the Government Commissions.	
Hoover Dam, general information	11254
Hopewell Village National Historic Site, general information	14610
Hopkins, William B.: geology and ground-water resources—	
Lake Dakota plain area, S. Dak.	8342
Scottsville area, Ky.	10296
Hops:	
foreign trade prospects	10208
stocks	9449, 20194
Hord, Richard A., atmosphere as part of space environment	8125
Horecky, Paul L., newspapers of Soviet Union in Library of Congress	5465
Horizon National Wildlife Refuge, birds	6459
Horizon, infrared, of planet earth	18146
Horizontally supported planar surfaces	7383
Horsing, John W., relief	11774
Hormones, thyroid, role in healing burns, USSR study	9016
see also Adrenal cortical extract—Adrenocorticotrophic hormone.	
Hormuth, Rudolf P.: clinical programs for mentally retarded children, listing	16914
proposed program to combat mental retardation	4598
Horn, Arthur G.: changes in northern Minnesota timber harvest	12176
Lake States pulpwood production up while Canadian imports drop to all-time low, 1962	15570
pulpwood production in Lake States counties, 1961	6488
Horn files, see Files.	
Horne, John E., nomination, hearing	15377
Hornets, see Wasps.	
Horsebrush, livestock poisoning in Western States, reducing losses	14856
Horses:	
4-H club program, guide for leaders	13185
light breeds, how to select, etc.	24
Horseshoe Bend National Military Park, general information	18207
Horst, K. M., plutonium-uranium carbide and plutonium-uranium oxide as reactor fuels	1829
Horticulturists, emergency loans to Florida nurserymen	6384
Horton, Victor W., F-104a airplane, use as 1st-stage-boosters for air-launching solid-fuel sounding rockets	5568

	Entry
Hose:	
Federal item identification guides for supply cataloging, supplements	3635
resin flexible, wire braid reinforced, incorporating polytetrafluoroethylene extruded tubing	1858
Hosiery mills:	
industry wage survey—	
departmental edition	5448
document edition	4704
Hospital and Medical Facilities Division, Hill-Burton publications, annotated bibliography	20104
Hospital apparatus and supplies, built-in equipment, checklist	1408
Hospital Corps, Navy:	
handbook	7167, 10934, 18060
laboratory techniques and procedures, handbook, chapter	18060
Hospital corpsmen, independent duty	10934
Hospitalization, see Hospitals.	
Hospitalization insurance, actuarial cost estimates	18311
Hospitals:	
administrators, employment outlook	20933
and related health facilities for long-term treatment and care, areawide planning	7395
Cambodia, Khmer-Soviet Friendship Hospital, report (address)	20789
central services, current literature	16508
civil defense emergency—	
establishing	21063
plans and training (paper)	21080
construction—	
labor requirements, errata sheet	14463
research facilities—	
1963 funds	11109
1963 funds	21036
departments, programing and equipping	21088
design features affecting maintenance of asepsis	9343
electroencephalographic suite, design, layout, etc.	14667
electronic and related electrical equipment	14666
emergency service, criteria for organization	14664
engineer in construction sequence—	
general—	
laboratory planning	11237
planning and design, selected references	5693
psychiatric facilities, mentally ill patients	12906
hospital and medical facilities—	
areawide planning procedures, guide	20101
Hill-Burton program—	
progress report, July 1, 1947–June 30, 1962	5690
register	8768
series	1408-09, 3285-88, 5690-93, 7403-5, 9343, 11237-238, 14664-667, 16506-508, 20101-104, 21085-86
State plan data, national summary, Jan. 1, 1963, reports and analyses	20102
Yards and Docks Bureau design manual, change	1602
hospitalization costs, impact on aged beneficiaries, national survey	9302
hospitalization reporting, comparison in 3 survey procedures	5689
insurance coverage of aged beneficiaries, national survey	9304
lighting needs for patient rooms, report of joint project	1400



# JANUARY-DECEMBER

Entry	Entry
Hospitals—Continued	
medical facilities survey and construction legislation, regulations, implement	21085
medical records, criteria for administrative evaluation	16506
multiple disability rehabilitation facilities planning, compilation of studies	5691
noise, acoustical study of types affecting patients	14665
outpatient services, references	16507
progressive patient care, estimating bed needs	7403
Public Health Service—	
medical internships	20107
physical therapists	9347
records, disease classification adapted for indexing	3289-90
recreation specialist examination announcement, discontinuance notice	18728
research grant program, administrative weaknesses, GAO review	19288
research in hospital use, progress and problems, conference report	3286
resident in hospital administration, examination announcement	4610
suburban community, vocational rehabilitation	21153
tuberculosis beds, index	5698
utilization studies, annotated bibliography	3287
workers, coverage under Fair labor standards act, extend investigation, hearings	7994
see also Mental Institutions—Military hospitals—Veterans hospitals—also names of hospitals or places where located.	
Host (biology):	
parasitic cowbird relations	12915
Hoeterman, John W., geology and refractory clay deposits, Haldean and Wrigley quadrangles, Ky	5016
Hot cycle rotor duct closure valve system	14751
Hot pressing technology in Soviet machine building and metallurgical industries	6865
Hot-water tanks, nursing homes needs	13005
Hotels:	
work injuries and work-injury rates	1160
workers, coverage under Fair labor standards act, extend investigation, hearings	7994
Hourani, May, relief	11927, 13406, 13479
Hours of labor:	
automotive parts wholesaling, Federal wage-hour law application	5766
Canal Zone, Federal wage and hour law, application	9485
computing overtime pay under fair labor standards act, basic rates	9488
durable goods manufacturing, trends	14482
employment and earnings (periodical)	3614
fair labor standards act—	
agriculture, etc., exemptions	18365
application to forestry or lumbering operations	16648
basic rates for computing overtime pay	18362
construction industry coverage	18364
overtime compensation	16645

Entry	Entry
Hours of labor—Continued	
fair labor standards act—continued	
overtime pay requirements, exempt in wholesale or bulk distribution of petroleum products	1591
reduce maximum workweek, hearings	15307
Government officials and employees, FPM supp	20383
labor force monthly report	3921
long hours and premium pay	19799
motor carriers employees, exemption from maximum hours, code of Federal regulations	16647
reduction of work hours, ILO convention and recommendations, text	20457
seafaring premium pay on privately operated U.S. flag merchant ships	16315
seamen on board ship, recommendations adopted at ILO convention, text	20526
union—	
building trades	12804
local transit operating employees	7169
motortruck drivers and helpers	12805
printing industry	14472
House, Kenneth W., UNIVAC file computer 1 air traffic control/automatic data processing system	18345
House, Peter, farm taxes on rural-urban fringe, case study of Fairfax County, Va.	10053
House Administration Committee, House:	
calendar	3836
hearings	7998, 9938, 18945
investigations and studies, funds, report	6127
reports	6094, 6118-38, 6141, 6150, 7918, 7929, 35, 9871-73, 11853-867, 13527-539, 13534-535, 13573, 13583, 13632-633, 15234-235, 17123, 17125-130, 17142, 18874-881, 18910-911, 20467, 20468, 20486
House bills	1976, 4669, 6066, 7831, 9814, 11734, 13442, 15166, 17057, 18793, 20451
House documents	219-285, 1977-2035, 4670-4729, 6067-92, 7832-71, 9815-41, 11735-765, 13443-467, 15167-187, 17058-74, 18794-813, 20452-458
House files, see Files.	
House of Representatives:	
appropriations, 1964, legislative reports	11830, 13750
budget, 1964, amendments	9838, 11762
calendars and history of legislation	3828
Cannon's procedure	9829
contested election, Odegard vs. Olson, notice of dismissal, etc.—document	4725
hearing	9935
delegates to attend International Labor Organization conference in Geneva, appoint, report	11812
delegation to conferences of NATO parliamentarians	
implement act of 1956, report	20476
Parla, 1962, report	9913
funds, transfer, report	13573
history, pictorial story	18795
journal, 87th Cong., 2d sess.	4668
Members—	
elections, 1962, investigation, report	2044



# INDEX 1963

Entry	Entry
House of Representatives—Continued	Household goods—Continued
Members—Continued	uncrated, traffic, Defense Supply Agency regulations— 10036, 17346
postage allowance, additional, report— 18875	see also Furniture.
stationery allowance, additional, report— 18874	Household management, see Home economics.
telephone and telegraph service allowances, additional, report— 18876	Household workers, see Servants.
transportation expenses, reimbursement, amend law— 15149	Households:
law reports— 13583, 13764	by type, 1963, population characteristics— 15071
official picture, grant U.S. Capitol Historical Society permission to take color photograph, report— 20477	food consumption and dietary levels, United States, survey— 4355
rules and manual— 6080	food consumption survey, 1955 report— 4355
telephone directory, Mar. 1963— 7830	interim revised projections of number of families, 1965-80— 7762
House planning aids (series)— 13179-182, 18438	older persons, living arrangements, 1950 and 1961— 9506
House plants, see Plants.	population characteristics, Mar. 1962— 18687
House reports:	unemployment rates, definitions, uses, and limitations— 12818
private bills— 6093-6102, 7872-7913, 9842-58, 11766-791, 13468-526, 15188-231, 17075-100, 18814-837, 20459-463.	Housekeeping, see Home economics.
public bills— 286-287, 2036-45, 4730-50, 6103-80, 7914-77, 9859-9916, 11792-868, 13527-633, 15232-294, 17101-153, 18838-914, 20464-492.	Housekeeping equipment, see Household goods.
House trailers, see Trailers.	Houses:
Household appliance stores, see Stores.	finance, homeowner properties— 4574
Household appliances:	census, 1960— 13396
census of housing, 1960, advance reports— 3504	nonwhite families— 13396
china tableware and kitchenware— 9461	planning aids (series)— 13179-182, 18438
dealers, control methods— 1452	reducing vulnerability to effects of nuclear weapons— 18716
Federal item identification guides for supply cataloging, supplements— 3659	residential alterations and repairs, construction reports— 3544, 15048
gas, U.S. market in—	sales, construction reports— 156, 3542
Australia— 147	see also Housing.
Austria— 13262	Housing:
Belgium— 7737	act of 1949—
Finland— 13263	urban renewal programs authorized by act, operations report— 4142
Honduras— 18615	urban renewal project directory— 4272
Iran— 18616	act of 1954, urban renewal project directory— 4272
Iraq— 18617	acts, compilation— 214
Italy— 7735	administrator, basic statutes, public regulations and formal orders— 2361-62, 15624-625
Ivory Coast Republic— 18618	aged—
Mexico— 18619	reading list for architects— 15627
New Zealand— 18620	relocation of elderly people, hearings— 6287, 8090
Panama, Republic of— 18621	senior citizens housing loan program, fact sheet— 9793
Paraguay— 18622	allowances, United Nations representatives, report— 13599
Peru— 18623	and community planning, 60 books, list— 14040
Philippines— 18614	authorized in individual permit issuing places, annual summary, 1962— 15047
El Salvador— 13264	better housing for future, report to Panel on Civilian Technology— 13040
Switzerland— 20339	Capehart projects, unnecessary costs incurred because of Air Force Department's administrative negligence and poor design in construction, GAO review— 20721
Uruguay— 7736	census, amend U.S. Code relative to duties of enumerators— 8007
West Germany— 626	hearing— 11834
Household employer's social security tax guide— 626	report— 11834
Household goods:	census, 1960—
and commercial furnishings and appliances, Federal item identification guides for supply cataloging, supplements— 3659	advance reports—
Armed Forces members, advance return, report— 13540	characteristics by standard metropolitan statistical areas— 3504
consumer buying intentions, quarterly reports— 6003, 11635, 16900	characteristics by States— 3504
retail trade, employee earnings, home furnishings and equipment stores— 3030	housing equipment, counties— 3504
departmental edition— 2014	
document edition— 2014	
shipments for Air Force, Navy, and Marine Corps personnel, unnecessary costs to Government for packing, GAO review— 8325	

# JANUARY-DECEMBER

Entry	Entry
	<b>Housing—Continued</b>
17346	census, 1960—continued
	components of inventory change— 172
	1903-8, 4593-94, 7769
	announcement and order
	forms— 151, 4560
	United States and regions— 172, 11638
	enumeration time and cost study— 16909
	final reports— 173, 13272-273,
	15036-38, 18643-646, 20343-347
15071	homeownership of nonwhite
	families, final report, an-
4355	ouncement and order form— 15033
4355	metropolitan— 1909-18,
	15080-81, 16879-881, 16907
7762	United States, statistics, re-
	port— 1909
9506	metropolitan, analytical data—
	Ablene-Corpus Christi, Tex. 15036
18687	Dallas, Tex.-Kalamazoo, Mich. 15037
12813	Kansas City, Mo.-Kans.-New
	Orleans, La. 15038
	Newport News-Hampton, Va.-
	Santa Barbara, Calif. 16879
	Ponce-San Juan, P.R. 18646
	Savannah, Ga.-Youngstown-
	Warren, Ohio. 16880
	United States and divisions— 13272
	metropolitan areas, announce-
	ment and order form— 18638
4574	residential finance, homeowner
3306	properties— 4574
8438	announcement and order
8716	form— 1874
	non-white families— 13306
5048	residential finance, rental and
3542	vacant properties— 16881
	announcement and order form— 13269
	rural, analytical data, United
	States and economic subre-
	gions— 13273
4142	States and small areas— 1919-20,
	15082, 18699
4272	Alabama-Connecticut— 20343
	announcement and order form— 16874
4272	Delaware-Indiana— 18644
214	Iowa-Massachusetts— 20344
	Michigan-New Hampshire— 20345
	New Jersey-Ohio— 18645
	Oklahoma-Tennessee— 20346
625	Texas-Wyoming— 20347
	United States summary— 15082,
	18643
5627	census publications, price list— 9334
5000	civilian employees of Federal agen-
	cies, rental, etc., regulations,
9793	extend authority— 18774
	law— 17285
3599	report— 6426
	code of Federal regulations— 6057
1040	college program, information— 671
	Communist China, problems and
	design of units— 10446
5047	construction, articles— 6003, 11635,
	quarterly reports— 16900
1040	current reports, housing vacan-
	cies— 157, 5993, 15056
	dealers and individuals subject to
	certain sections of title 1, Na-
	tional housing act, list— 8232
721	District of Columbia code regula-
	tions, enforcement and admini-
	stration, report— 2037
	dwelling units and room layout in
	residential buildings, Commu-
	nist China— 12449
007	elderly, direct loan program— 20439
834	law— 17149, 19024
	reports— 5042
	equal opportunity— 2363
	lecture— 8350
504	President's executive order
504	11063— 2363
504	questions and answers— 8350

Entry	Entry
	<b>Housing—Continued</b>
	equipment, counties, census of hous-
	ing, 1960, advance reports— 3504
	family, illegal use of operation and
	maintenance funds for rehabili-
	tation and construction, De-
	fense Dept., GAO report— 17508
	family, in shore establishments,
	Yards and Docks Bureau de-
	sign manual, change— 1604
	farm labor, construction guide— 8210
	Federal activities coordinated with
	education and welfare— 12058
	Federal laws, elderly, direct loans— 5043
	FHA mortgage insurance for urban
	renewal, fact sheet— 10153
	FHA's rental housing program,
	what it is, how it works— 12110
	Fort Dix, unnecessary expenditures
	for exterior storage facilities,
	GAO report— 14010
	Guam, public authority to under-
	take, reports— 13567, 20583
	housing and planning references— 3773
	industry, strengthen growth
	through tax reduction (re-
	marks)— 5760
	insurable loans, digest— 4892, 17430
	intern program planned for accel-
	erated professional growth and
	advancement— 10307
	international programs, study—
	committee print— 13795
	hearings— 12008
	investigation—
	authorization, report— 4737
	expenses, report— 18881
	land purchased for low-rent project
	in Detroit, Mich., transfer for
	urban renewal purposes—
	law— 18782
	reports— 17103, 17300
	low cost, minimum property stand-
	ards, general revision— 13912
	low-income demonstration program,
	guide— 12240
	low-rent projects—
	eligibility requirements, rents,
	and occupancy, Public Hous-
	ing Administration, GAO re-
	view— 10264
	undue increases in Federal con-
	tributions resulting from meth-
	od of financing off-site commu-
	nity facilities, Public Housing
	Administration, GAO review— 17511
	unnecessary equipment for meas-
	uring electricity and gas con-
	sumption, GAO report— 12205
	migrant agricultural workers, labor
	camp standards— 9035
	minimum property standards for
	urban renewal rehabilitation— 13913
	multifamily, FHA self-insurance on
	acquired property, hearing— 13643
	multi-family projects, European and
	American, intensity of devel-
	opment, etc.— 13911
	national housing act—
	property improvement with title
	1 insured loans, FHA fact
	sheet— 8233
	text, amendments— 8236
	national housing act, amend—
	hearings— 11892, 15304
	laws— 13428, 18774
	reports— 11796,
	11847, 13741, 15285, 17285
	nonwhite population, changes be-
	tween 1950 and 1960— 14041
	paraplegic, program, expand, re-
	port— 6149

# INDEX 1963

	Entry		Entry
Housing—Continued		Housing and Home Finance Agency—Con.	
policies, effectiveness in poverty		loans or grants for urban mass	
elimination in U.S., research		transportation systems in met-	
report on slums and insecurity	14700	ropolitan areas, authorize—	
private, District of Columbia anti-		hearings—	6290, 7090, 8090
discrimination regulations re		summary—	7964, 8049-50
sale or rental, hearing—	7991	low-income housing demonstration	8095
project mortgage insurance, FHA		program guide—	12240
regulations—		news releases—	4059
amendments—	4897-98,	office building, construct in Dis-	
revisions—	8234, 19180-183	trict of Columbia, hearing—	2057
public—	15488	report, 1962—	20747
low rent, cooperative extension		weekly news summary of releases	
service work with low income		issued—	3772
families—	20662	Housing for Senior Citizens Office,	
low-rent, local authorities partici-		report—	19341
pating in FHA programs—	16540	Housing insurance, see Mortgage in-	
low-rent program, personnel,		surance.	
leave, and travel policies appli-		Houston, Billy J., nonmetallic	
cable to non-Federal employ-		waterstops—	13890
ees, Public Housing Adminis-		Houston, Tex.:—	
tration, GAO review—	2328	electric facilities of area, map—	521
open occupancy trends in low-		income, education, and unemploy-	
rent programs—	21096	ment in neighborhoods—	5455
planning for health, education,		occupational wage survey—	
and welfare services in commu-		departmental edition—	18037
nity—	19339	document edition—	17064
program for senior citizens, fact		principal electric facilities, map—	2266
sheet—	9363	Hovenweep National Monument, gen-	
public and private, investigation,		eral information—	11110
expenses, reports—	6233, 6242	Hovering characteristics of rotor	
renovation and brick designs, Chi-		having airfoil section designed	
nese study—	14234	for utility type of helicopter—	1307
rural residents and urban expan-		Hovey Mountain, geology and man-	
sion—	20626	guese deposits of area—	6554
savings and home financing, 1963,		How can farmer cooperatives con-	
senior citizens loan program, de-		tribute to rural develop-	
sign guides—	6058	ment?—	6283
servicemen's dependents, rental lim-		How our laws are made—	11756
itations, increase, report—	11961	print as House document, reports—	7932,
services for families living in public			8093
housing—	19339		6374
specially adapted housing for blind		How to conduct a hearing—	
veterans, grants by VA, report—	6149	How to display and respect flag of	
starts, construction reports—	3543	United States—	3212
statistics, monthly—	3774	How-to-do-it for State committees for	
Swedish homes for aged offer ideas		children and youth—	6012
for Americans—	14649	Howard, C. L., fuel cycle program,	
United States AID missions, bibli-		boiling water reactor research	
ography—	15626	and development program—	16845
units, condition by size of place—	11370	Howard, Gene S.:—	
revised table—	18358	broadleaf deciduous trees for wind-	
USSR, development of microrayons—	8857	breaks, effect of spacing dis-	
vacant units in United States—	157,	tance, etc—	20294
	5993, 15056	hardy, productive tree fruits for	
veterans, home-buying guide—	10641	high altitude section of cen-	
voluntary home mortgage credit		tral Great Plains region—	1627
program—	19342	Howard, Mildred S.:—	
see also Barracks and quarters		Beltville energy-saving kitchen,	
Houses—also names of States,		design 3—	4356
etc.		corner storage in kitchens—	18438
Housing and Home Finance Agency:		kitchen arrangements—	
administrator, basic statutes, pub-		broken-U—	13180
lic regulations and formal or-		L-shaped—	13181
ders—	2361-62, 15624-625	parallel-wall—	13182
appropriations, 1963, proposal—	7863	U-shaped—	13179
appropriations, 1964, hearings—	18919	Howard, Paul W., surface roughness	
approval of land-use projects for		effect on transition—	16400
metropolitan areas, hearings—	17313	Howden, Henry F., scarab beetle of	
career opportunities for financial		genus Onthophagus Latreille—	3183
analysts—	16965	Howe, John T., nonequilibrium flow	
Fort Worth regional office, commu-		field behind normal shock	
nity improvement, workable		waves in carbon dioxide—	14571
programs, GAO review—	2333	Howell, John R., directional be-	
HHFA housing intern program		havior of emitted and reflected	
planned for accelerated profes-		radiant energy from gray,	
sional growth and advance-		asymmetric groove—	16390
ment—	10307	Howell, Leland L., advertising, retail	
HHFA program guide—	6057	store—	14688
		Howell, Robert R., behavior of spheres	
		ablating under constant aerody-	
		namic conditions, study—	11030
		Howes, M. H., mineral industry of	
		Utah—	3068

Entry	Entry	Entry
0. 8099 049-50 8095	Hewes, Merwin H., methods and costs of shaft sinking, U.S.A.M.C. Project Gnome.....	Hull, J. Dan, how fare American youth in 1962?.....
12240 4059	Hoyt, E. W., radiation effects in borides, helium release, etc.....	Hulls (ships): structures, sound-insulating capability of ship hull coverings, USSR study.....
2057 20747	Hoyt, Elizabeth E., contribution to national economy of use of resources within and by the family.....	submarine construction, applicability of high strength quenched and tempered steels, determining factors.....
3772	Hruechka, H. W., storage and shelf life of packaged blueberries.....	Human aging, biological and behavioral study.....
19341	Hsiang-hai Tu-chia and Miao Nationalities Autonomous Chou, Hunan Province, China, historical development.....	Human engineering: Behavioral Sciences Laboratory, bibliography.....
13680	Hsiang, Ve-Shen, see Ve-Shen Hsiang.	bioelectronic foundations.....
521	Hsu, Yih Yun, visual study of 2-phase flow in vertical tube with heat addition.....	equalization teaching machine, design and operation.....
5455	HTGR (high temperature gas-cooled reactors), see Reactors (atomic).	human factors research, bibliography.....
18037 17064 2286	Hualapai Indian Reservation, geology and areas for ground-water development.....	principles of design for in-space maintenance.....
11119	Huang, Su-Shu: boundary conditions of B Stars.....	USSR book, outline.....
1307	Huang, Thomas S., meteorological satellite system analyses.....	Human Engineering Laboratories, technical memorandums.....
6354	Huber, R. W., consumable-electrode vacuum-arc-melted electrolytic iron.....	Human factors in engineering design, see Human engineering.
6283 11756 7932 8083 6574	Huddle, J. W., coal reserves of eastern Kentucky.....	Human race, see Man.
3212	Huddleston, Edith M., statistics of higher education, 1957-58, faculty, students, and degrees.....	Human reaction in simulated space environment, USSR.....
6012	Hudson, C. Michael, variable-amplitude loads effects on fatigue crack propagation patterns.....	Human relations: brotherhood as means of creating better life for all (address).....
6845	Hudson, R.Y., improvement of navigation conditions, Conneaut Harbor, Ohio, hydraulic model investigation.....	international meetings, world list.....
0294	Hudson Bay, surface water quality of basin.....	political actions for meeting human needs (address).....
1627	Hudson River, waterway to Great Lakes, improvement, complete, hearing.....	Human resources, see Ability.
4356 4438	Huff, Lyman C., comparison of geological, geophysical, and geochemical prospecting methods at Malschite mine Jefferson County, Colo.....	Human rights, see Civil rights.
3180 1181 1182 1179	Huggins, Charles W., replica electron microscopic method for measuring Knoop hardness indentations.....	Human transfer functions: measured variation of human pilot in single-axis tasks.....
1400	Hughes, Edward T., relief.....	measuring.....
183	Hughes, J. C., testing of metal volumetric standards.....	Humane slaughter, 1962 progress report.....
571	Hughes, Jay, pulp and paper making opportunities in west central Colorado.....	Humane treatment of animals used in research.....
390	Hughes, Ralph H., fertilization of young slash pine in cultivated plantation.....	Humanities, USSR, teaching.....
388	Hughes Aircraft Company, Falcon missile components purchased from Avco Corp. under negotiated contract, excessive costs included in prices, GAO report.....	Humble, I. V., nuclear propulsion of aircraft.....
030	Hugo Reservoir: Klamichi River, flood control, engineer report.....	Humboldt County, Nev.: geology of Jackson Mountains.....
68	Hull, A. C., jr., pellet seedling on Western rangelands.....	ground water in alluvium of Kings River Valley.....
	Hull, Cordell, 5-cent commemorative stamp (poster).....	Humboldt River and Valley, Quaternary alluvium, specific-yield and particle-size relations.....
		Humes, Donald H., effectiveness of single aluminum meteoroid bumpers, investigation.....
		Humes, J. J., laboratory techniques and procedures, handbook of Hospital Corps, Navy.....
		Humes Construction Co., motor carrier accident.....
		Humidity: control equipment in Govt. buildings, repeal portion of act of 1943.....
		hearing.....
		law.....
		reports.....
		moisture content of fine fuels in forest and relative humidity.....
		occurrence of floods in humid region of diverse terrain, factors, influencing.....
		regulation by plants, effect of automation from standpoint of cybernetics, USSR study.....
		temperature measuring set, AN/TMO-11, error analysis.....
		see also Moisture.
		Humphreys, Lloyd G., hierarchical factors in course grades in aviation high school.....



# INDEX 1963

	Entry
Hunan Province, China, geographic gazetteer	916
Hung-chi (periodical):	
translation	704
1113, 1144, 2793, 2962, 5407, 8564, 8702, 10549, 10725, 12407, 12536, 14238, 17950, 19455, 19525, 19676, 20851, 20853	
Hungarian Academy of Sciences and Biometry, translations	8751
Hungarian chemists journal (periodical):	
translations	12588
Hungarian language, Foreign Service Institute, basic course	13069
Hungarian science (periodical):	
translations	8751
Hungarians, physicists, 9th congress held in Debrecen, 1962	8923
Hungary:	
Academy of Sciences—	
activities	2932
associations and societies	7060
congress and general assembly, 1963	19453
Division of Biological and Medical Sciences, activities	6760
agriculture, forestry, and fishing	731
2454, 2669, 5227, 6882, 8769, 8960, 10707, 12605, 14393, 15897, 17657, 19643, 20876	
Animal Health Administration development, new stage	8799
atomic science and engineering	798
biologists, 5th national session	6896
Budapest Technical University, chemical engineering achievements	8762
Budapest University, achievements in electrical engineering	6913
Bukk plateau, microclimatic measurements on Great Meadow	17748
chemists visit Soviet bloc chemical institutions	12623, 14115
communist in workers' paradise, consultation with John Santo	8013
doctors and candidates—	
Kosuth-prize winners, 1963, list	17811
science, list	7036
East European legal journals, abstracts	857
2554, 2789, 5138, 8891, 10477, 12556, 14194, 14337, 16088, 17847, 17971	
electrochemical research	7035
geophysics, 8th symposium	15685
harsher political justice	14129
health situation, statistical data, 1961	2888
higher education, report of interview	6716
medical documentation	15992
medical science	2933
natural sciences and national long range research plan, status evaluation	15909
pharmacies, operation	2931
physics, developments	12637
provincial press, summaries	716-717, 771, 998, 1041, 1091, 2544, 2643, 2893, 2977, 5197, 5329, 6753, 6895, 6993, 7109, 8582, 8606, 8722, 8850, 8941, 10398, 10538, 10676, 10759, 10761, 10860, 12478, 12594, 12646, 12728, 14167, 14276, 14409, 15768, 15813, 15883, 15896, 16031, 16168, 16214, 16255, 17595, 17869, 17943, 19393, 19520, 19601, 19655, 20835, 20907
radioactive radiation sources	15763
relationship between vegetation and relief	17830
research, preparation of annual plans, regulations	15694

	Entry
Hungary—Continued	
science—	
development and problems	8549
engineering, and higher education, recent statutes	6702
State Survey and Mapping Bureau, role	7003
statistical yearbook, 1961	12697
surveying and mapping, current problems	12677
technical universities, evaluation, organization and planning of research, problems	991
Hunger, Herbert H., status report on fuel cells	9380
Hunt, Douglas C., thermal balance in F region of atmosphere	1333
Hunt, Elizabeth V., foster care for delinquent girls	1924
Hunt, Gerald L., static longitudinal stability characteristics of air-to-surface canard missile configuration	11008
Hunt, O. J.:	
development of field research equipment and evaluation of methods of establishing forage crops	9591
effects of phosphorus and potassium fertilizers on yield, etc., of grass-legume mixtures	16712
Hunte, Carretta G. T., relief	8028
Hunter, Elmer C.:	
changes in cattle-feeding industry along North and South Platte Rivers, 1953-59	10052
forage programs, etc., Colorado mountain - meadow cattle ranches	8147
Hunter, John H., Jr., costs of operating exempt for-hire motor carriers of agricultural commodities, etc.	8152
Hunter, Patricia P., State educational agency publications in education of exceptional children and youth	13847
Hunter, Paul A.:	
maneuver accelerations experienced during routine operations of commercial turbojet transport airplane	11070
VG and VGH operational data from twin-engined turbojet transport airplane	14577
Hunter, Ronnie E., relief	6100, 11945, 13395
Hunting:	
migratory bird regulations, 1963-64	15535, 17461
sale of special permits for use in national forests, unauthorized diversion of revenues by Forest Service, GAO report	2335
waterfowl utilization and kill, 1946-60, Upper Mississippi River Wildlife and Fish Refuge, etc.	15537
Huntington, W. Va., area redevelopment manpower report	17399
Huntington Beach, Calif., population, special census	165
Hurd, Edgar, costs and returns, commercial wheat farms, Pacific Northwest, Northern Plains, Southern Plains, 1962	15413
Hurley Construction Co., relief	11777
Huron, S. Dak., Municipal Airport, weather observations, hourly, decennial census	16660
Huron, Lake, small craft, gale and whole gale warning facilities chart, 1963	13129



Entry

8549

6702

7003

2697

2677

991

9380

1333

1924

1003

9591

9712

9028

9082

147

152

947

970

977

995

961

935

937

909

935

913

977

900

909

909

909

909

909

909

909

909

909

909

909

909

909

909

909

909

909

909

909

909

909

Entry

Hurrell, Herbert G., simplified theory for dynamic relation of ramjet pressures and fuel flow.....	7231
Hurricanes:	
Anna, radiation view from Tiros III meteorological satellite.....	9177
Hurricane Carla, Sept. 3-14, 1961, evacuation, etc., civil defense report.....	180
North Carolina, descriptive listing of tropical cyclones.....	9503
storm surge characteristic.....	13131
surveys, engineer reports—	
coastal areas, Ga.—	
departmental edition.....	6361
document edition.....	6085
Eastern Shore, Va.—	
departmental edition.....	2195
document edition.....	2016
Fairfield, Conn.—	
departmental edition.....	2196
document edition.....	2017
Freeport, Tex.—	
departmental edition.....	410
document edition.....	289
Mississippi River Delta—	
departmental edition.....	436
document edition.....	262
New London, Conn.—	
departmental edition.....	441
document edition.....	235
Pawleys Island, S.C.—	
departmental edition.....	19146
document edition.....	18311
Point Judith, R.I.—	
departmental edition.....	448
document edition.....	253
Port Arthur and vicinity, Tex.—	
departmental edition.....	449
document edition.....	243
Wareham and Marion, Mass.—	
departmental edition.....	2226
document edition.....	1991
Wrightsville Beach, N.C.—	
departmental edition.....	467
document edition.....	248
Hurt, George J., Jr., rough-air effect on crew performance, simulated low-altitude high-speed surveillance mission.....	16398
Hurt, Leslie C., coffee situation.....	13981
Husbandry, see Agriculture—Animals.	
Husbands and wives:	
food for young couple.....	27
older brides and grooms, characteristics.....	5040
Huss, Carl E., parameter study of insertion conditions for lunar missions.....	19944
Huston, Robert J.:	
wind-tunnel measurements of performance, blade motions, etc., of tandem-rotor configurations, etc.....	19031
wing and flap loads of large scale V/STOL model, wind tunnel investigation.....	11029
Hutchinson, S. Blair, management for commercial timber, Clark Fork unit, Mont.....	6487
Hutt, William E., basic data on economy of Islamic Republic of Mauritania.....	6594
Hutton, R. E., resonant, nonlinear, nonplanar free surface oscillations of fluid.....	11073
Hybridization:	
pollination of non-emasculated flowers, biological characteristics of hybrids, USSR study.....	5176
survival and growth of 12-year hybrid aspen compared to native Wisconsin stock.....	15569
white pine, western and eastern, growth and performance.....	10214

Entry

Hyde, C., sinterable oxide powders and ceramics made from them.....	9639
Hyderabad, India, water vapor vertical distribution, and comparison with mid-latitude distribution.....	12951
Hydras, heat resistance, effect of maintenance temperature, USSR study.....	14164
Hydrates, crystalline, of ferrous sulfate, heats of formation.....	16332
see also Gas hydrates.	
Hydraulic brake fluids, see Fluids.	
Hydraulic fluids, see Fluids.	
Hydraulic fracturing, see Petroleum.	
Hydraulic mining, see Coal mines and mining.	
Hydraulic presses, laboratory preparation of fish press cake.....	8274
Hydraulic systems:	
automation, pneumatic-hydraulic, USSR seminar.....	5347
corroded units performance, investigation, USSR study.....	5145
protect installations from overgrowth of Dreissena, USSR study.....	12515
Hydraulic turbines, see Turbines.	
Hydraulics:	
characteristics of NASA Plum Brook reactor, measuring techniques.....	16367
Committee on Tidal Hydraulics, technical bulletin.....	13877
geometry of small tidal estuary.....	15612
ground-water hydraulics (series).....	2353, 19322
model investigation—	
Allegheny dam, spillway and sluices.....	10092
Arkansas River, navigation sedimentation conditions.....	15457
Connecticut Harbor, Ohio, navigation improvement.....	6378
Duluth-Superior Harbor, wave action and breakwater location.....	4874
John Redmond Dam, Grand (Neosho) River, Kans., spillway.....	2227
Lorain Harbor, breakwater and navigation entrance.....	13887
Siuslaw River, Oreg., stability of south jetty.....	15458
stilling well energy dissipator.....	10091
physiographic and hydraulic studies of rivers (series).....	15612, 17528
prototype tests, Fort Randall Dam flood-control tunnel 10.....	13866
research in United States, 1963.....	16418
research in Yugoslavia, 1954-62, review of development.....	20875
tidal problems in U.S., encountered by Corps of Engineers.....	13877
tide-affected streams, discharge measurements, empirical method of determining.....	15617
Hydrazine, nitrogen tetroxide reaction, mechanism and chemical inhibition.....	11475
Hydrides, transition metals.....	1819
Hydrobiology, see Marine biology.	
Hydrocarbons:	
catalytic oxidation.....	3051
chlorinated, effects on substrate-linked phosphorylation.....	16806
gaseous oxidation, adaptation of individual species of saprophytic microflora, USSR study.....	17701
hydrocarbon-oxidizing bacteria research, East Germany study.....	8459
radiation thermal cracking.....	16517
solid and derivatives, X-ray powder diffraction patterns.....	20941

	Entry
Hydrocarbons—Continued	
vapor phase oxidation in low-temperature coal tar.....	10955
Hydrochemistry:	
development in Communist China, study.....	8682
method used in prospecting for ore deposits.....	10803
Hydrochloric acid, heat of solution of cerium metal.....	3100
Hydrocooling, <i>see</i> Cooling.	
Hydrocortisone, oral dosage, corticosteroids in human parotid fluid following.....	9681
Hydrocracking low-temperature tar from North Dakota lignite.....	10966
Hydrocyclones—	
clay beneficiation.....	16345
metallurgical industry, USSR.....	14261
Hydrodynamics, calculation of orographic cloudiness in stable and unstable atmosphere, USSR study.....	10820
Hydroelectric power, <i>see</i> Electricity.	
Hydroelectric power plants, <i>see</i> Electric power plants.	
Hydrogasification of bituminous coals, lignite, anthracite, and char.....	8083
Hydrogen:	
choking 2-phase flow literature summary and idealized design solutions.....	18191
disassociating, calculation of transport properties and heat-transfer parameters, errata.....	7244
effect on stress-rupture and fatigue properties of iron-, nickel- and cobalt-base alloy.....	1287
effect on structural transformations in titanium alloys, USSR study.....	7046
electron-hydrogen phase shifts just below inelastic threshold.....	12861
errata.....	18138
electron-hydrogen scattering, non-adiabatic theory.....	14550
flames, sampling measurements downstream.....	1308
fuel for turbojet-engine—	
effect of combustion gas properties on performance.....	1259
performance and operation at high altitudes.....	1260
fuel, performance of short turbojet combustor in quarter-annulus duct.....	10976
gaseous—	
ramjet engine fuel, investigation at Mach number 3.....	8106
single fuel-vaporizing combustor with injectors adapted for.....	10975
heat transfer and fluid-flow computations, formulation and digital coding.....	12854
liquid—	
aircraft-fuel-tank design.....	10973
hazards associated with use in bubble chambers.....	20966
hydrogen under simulated zero gravity conditions, photographic study.....	11013
montmorillonite, dual acidity and structure.....	14023
normal, thermodynamic properties from low temperature to 300 K and from 1 to 100 atmospheres tabulated.....	1331
nuclei, in 1960 solar cosmic ray event.....	11051
overtoltage and electrochemical potentials of zirconium and zirconium intermetallics.....	18571

	Entry
Hydrogen—Continued	
overtoltage on metallic single crystals, research.....	11473
oxygen-hydrogen-helium mixtures, combustion tests at loading pressures up to 8,000 pounds per square inch.....	19018
positron-hydrogen scattering.....	16386
storage, servicing, transfer, and handling.....	1742
Hydrogen ions, sputtering, effects on total hemispherical emittance of metallic surfaces.....	5598
Hydrogen isotopes, heavy, deuterium and tritium, properties, etc., USSR study.....	20779
Hydrogen peroxide, catalyst beds for 98-percent-concentration H <sub>2</sub> O <sub>2</sub> .....	14558
Hydrogenation:	
iron-catalyzed, phenyl ether, benzyl ether, and phenyl sulfide.....	7216
pitch from low-temperature carbonization of coal.....	3082
Hydrogeology:	
Middle Canyon, Oquirrh Mountains, Utah.....	19324
San Nicolas Island, Calif., hydrogeologic reconnaissance.....	6562
Hydrographic manual.....	11073
Hydrology:	
Agua Caliente Spring, Palm Springs, Calif.....	8346
and geology of Guam, Mariana Islands (series).....	15611
Bunker Hill Air Force Base and vicinity, Peru, Ind.....	19323
California storms, meteorology.....	7515
Cecil and Lloyd soil series, Piedmont forests.....	6519
contributions to hydrology—	
Africa and Mediterranean region (series).....	14037
Asia and Oceania (series).....	17530
Latin America and Antilles (series).....	614, 15619
United States (series).....	609, 613, 2354, 2358, 5025, 5031, 5037-38, 6562-63, 6565-66, 8340-43, 8347-51, 8355-56, 10297, 10299, 12232, 12235-236, 14033-36, 15620, 17532, 19323-329, 20741, 20742, 20744.
Elk River, Minn., nuclear-reactor site.....	14016
flood hydrology (series).....	2355
Geological Survey research 1963, short papers.....	14026, 20737
geology and hydrology of Guam, Mariana Islands (series).....	19316
geometry, Thailand, ground mobility.....	13888
ground water, electrical and radioactive well logging application.....	14028
Hallam Nuclear Power Facility site.....	2341
hydrology of public domain (series).....	5026-28
Little Lost River Basin, Idaho, reconnaissance.....	10297
Maynard, Mass., ground-water of area.....	2354
meteorology and hydrology (USSR periodical), translations.....	880, 1077, 2713, 5305, 8500, 8665, 10531, 14281, 15780, 16032, 17658.
Pinto Basin, Joshua Tree National Monument, Calif., reconnaissance.....	5028
plotting positions for logarithmic-normal frequency studies.....	18397
prairie potholes, current studies.....	12227
production of mineral fuels and hydropower in U.S. since 1800.....	7211

Entry	
	Hydrology—Continued
	public domain (series)----- 2352, 6561
473	research, 1962-----
	short papers----- 6559
	synopsis of results----- 608
018	San Simon Basin, Ariz., analysis
338	and evaluation of data----- 10299
	scientific notes and summaries of in-
742	vestigations----- 6559
	statistical studies in hydrology (se-
	ries)----- 607, 5023, 6557, 10293
	stock-water development-----
598	Ely grazing district, Nev----- 5026
	public domain of western Utah----- 6566
779	tidal streams (series)----- 611, 15617
	tide-affected streams, discharge
538	measurements, empirical meth-
	od of determining----- 15617
	USSR research----- 17724
	Valle Grande and Valle Toledo,
216	Sandoval County, N. Mex----- 19325
082	Western States, small watersheds----- 2352
324	Hydromagnetic stagnation point
562	boundary layer with arbitrary
073	pressure gradient and mag-
	netic field----- 11044
	Hydromagnetic waves, see Magneto-
	hydrodynamics.
	Hydrometeorology:
	hydrometeorological reports... 7515, 16667
346	USSR, Barents Sea and Atlantic
611	Ocean, servicing fishing indus-
	try----- 795
	Hydrophones:
323	calibrator----- 21058
513	directional, response to multiple
519	sources, graphical determina-
	tion----- 18240
037	infrasonic, calibration by null
530	method----- 8801
	Hydrostatics, high-pressure-high-tem-
	perature metallurgy, research
	and development----- 7649
	Hygiene:
619	industrial, workers, publications
509,	list----- 12960
331,	labor, beryllium, toxicology, clin-
06,	ical aspects of diseases, USSR
536,	study----- 1021
236,	military, USSR textbook----- 2736
23-	publications, price list----- 14654
	translations from Gigiyena i sani-
	tariya----- 835, 2574, 5141, 8851
016	USSR reports----- 15935
355	USSR translations----- 10769
	see also Health.
737	Hygiene and sanitation (USSR peri-
	odical):
816	translations----- 10768
888	Hygienists, see Dental hygienists--
	Industrial hygienists.
028	Hygrometers, mortarboard psychrom-
841	eter----- 19270
-28	Hyland, Robert E., two-dimensional
297	criticality calculations of gase-
354	ous-core cylindrical-cavity re-
	actors----- 7260
777,	Hylididae, catalog----- 1646
331,	Hymenoptera, see Wasps.
028	Hynes, Kenneth N., economic develop-
897	ments in Argentina, 1962----- 8411
227	Hyperemia, inflammatory, effects of
811	local application of cold, USSR
	study----- 986
	Hyperglycemia, postirradiation in
	primate----- 16800
	Hypersonic flow, see Flow.
028	Hypertension, cause and cure, NHI
397	supported research grants----- 19063
227	see also Blood pressure.
811	Hypothermia:
	dogs, its dependence on available
	body water during muscular ex-
	ercise at high environmental
	temperature, USSR study----- 17690

	Entry
<b>Hyperthermia</b> —Continued	
progressive, development of tissue hypoxia	18501
<b>Hyperventilation</b> :	
anesthetized dogs, cerebral excess lactate production	80
in-flight, detection by blood and urine analyses	5891
<b>Hypophthalmichthys</b> , productivity, USSR study	16233
<b>Hypophysis</b> , see Pituitary gland.	
<b>Hypothalamus</b> :	
and its connections, anatomy	11489
lesions, effects on shivering in cats	11494
stimulation, activation and suppression of shivering	11402
stimulation of unanesthetized cats	11490
<b>Hypothermia</b> :	
bicarbonate excretion during hypothermia	4415
brain, by esophageal cooling technique	13216
effects on magnesium metabolism	18471
effects on regulation of extracellular potassium	16794
profound, induced and reverted with pump oxygenator	11497
rat, survival and tolerance to circulatory arrest	13205
renal regulation of bicarbonate loads	4418
structural and histochemical changes in central nervous system neurons, USSR study	1001
urine titratable acidity and ammonia excretion	13215
USSR studies	5154
<b>Hypoxia</b> :	
effect of rate of oxygen consumption of mice at various environmental temperatures	14917
induced, effect on thermoregulation and cardiopulmonary function	11495
tissue, development during progressive hyperthermia	18501
see also Oxygen deficiency.	
<b>Hysteresis</b> , loop of cobalt-nickel ferrites	20314
<b>I</b>	
<b>I.A.E.A.</b> , see International Atomic Energy Agency.	
<b>I &amp; N</b> reporter	3775
<b>I.C.R.U.</b> , see International Commission on Radiological Units and Measurements.	
<b>I.L.G.W.U.</b> , see International Ladies' Garment Workers' Union.	
<b>I.R.S.</b> , see Internal Revenue Service.	
<b>IAEA</b> , see International Atomic Energy Agency.	
<b>IAGLO</b> , see International Association of Governmental Labor Officials.	
<b>Iatron</b> tubes, projection Iatron application to high speed multi-channel plotter	12946
<b>IBRD</b> , see International Bank for Reconstruction and Development.	
<b>ICAO</b> , see International Civil Aviation Organization.	
<b>ICBM</b> (Intercontinental ballistic missile), see Missiles.	
<b>ICC</b> , see International Commission for Supervision and Control in Laos—Interstate Commerce Commission.	
<b>Ice</b> :	
electrical D-C resistivity measurements on glacier ice near Thule, Greenland	4841

# INDEX 1963

	Entry
Ice—Continued	
evaluation of snow, ice, slush removal and disposal equipment for Washington International airport	9454
formation in feet of mice, extent of injury, observations and evaluation	1756
frozen to clean and lubricated surfaces, adhesion-shear strength	11174
International Patrol, North Atlantic	11678
lake sheets, load test data	19137
sheet in Greenland, stratigraphic studies in snow and firn	2188
Ice age, see Glacial period.	
Ice Age National Scientific Reserve, Wis., establish, proposal for cooperative conservation	9240
Ice cream, ice, etc., containers, amend D.C. act regarding size, report	18893
Iceland:	
agricultural commodities, agreement	11314
air navigation services, joint financing, international agreement	16591
bibliography of social science periodicals and monograph series, 1950-62	1900
civil aviation, survey	5985
education exchange programs, financing, agreement	16576
import tariff system	2428
lights and fog signals, list	1364, 21053
preparing shipments to	2429
relief from double taxation on earnings from operation of ships and aircraft, agreement	7453
sailing: directions, change	5649
Ichthyofauna, see Marine fauna.	
Ichthyology, see Fish and fisheries.	
ICIREPAT 1963, progress, pitfalls, and prospects, text of address	20018
ICRU, see International Commission on Radiological Units and Measurements.	
IDA, see International Development Association.	
Idaho:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4571
census of population, 1960, characteristics of population	11606
climatological data	3517
county business patterns, activities covered by OASDI program	15054
errata	18677
electric rate book	508, 13917
5B redevelopment area, statistical profile	13359
geology of Clark Fork quadrangle	17523
minerals industry, minerals of yearbook chapter	20956
national forests, pest control progress 1961	10230
participate in Pacific Marine Fisheries Commission compact, hearings	4757
precipitation data, hourly	3771
public school finance program, 1961-62	12074
southeastern, Bannock thrust zone, geology	8336
southern, control of beet leafhopper by seedling breeding areas to range grass	9540
timber resources	569
water supply outlook and snow surveys	9391
ZIP code directory	20036

Idealized and practical pandemonium, USSR	3312
Identification:	
crop and weed seeds	9561
errata	20277
item management responsibilities realignment in Air Force Logistics Command to implement Federal cataloging program, GAO review	10269
marking of experimental grazing animals	10229
Ideology:	
discipline and personal welfare, food caterer's ideas on, Communist China study	2852
scientists role, USSR study	19692
United States ideological offensive in winning cold war, hearings	7997, 11901
IFBCA, see Indiana Farm Bureau Cooperative Association, Inc.	
IFR, see Instrument flight rules.	
Igbo language, Foreign Service Institute, basic course	5726
Igneous rocks:	
Columbia Plateau lavas, field, petrographic, and chemical characteristics, study	2342
geology and petrography of volcanic rocks of Truk Islands	8338
Magnet Cove alkaline igneous complex	12229
petrography	12228
see also Gabbro—Lava.	
Ignition:	
autoignition of lubricants at elevated pressures	1248
combustible mixtures by laminar jets of hot gases	19865
solid propellants, with chloring trifluoride	3144
IGY, see International Geophysical Year, 1957-58.	
Ihnat, J., diode digital-to-analog conversion technique	18230
ILGWU, see International Ladies' Garment Workers' Union.	
Ili River, general information	8654
Iline, Nathalie, relief	15223
Illinois:	
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics	3517
climatological data	3517
county business patterns, activities covered by OASDI program	15049
electric rate book	15493
5B redevelopment area, statistical profile	15126
lumber production, 1961	6506
mineral industry, minerals yearbook chapter	1213
population, 1960, characteristics	18649
precipitation data, hourly	8771
public school finance program, 1962-63	15442
southern—	
apple storage and packing facilities	13176
preplanting treatments for brushy old fields	13986
urban areas along Mississippi River, flood control, engineer reports—	
departmental editions	437-438
document editions	226, 267
ZIP code directory	20037
Illinois Central RR., accidents	12268, 15662
Illinois Harbor:	
improvements, engineer report—	
departmental edition	2199
document edition	2005



# JANUARY-DECEMBER

Entry	Entry
<b>Illiteracy:</b>	
AFQT 7 and 8 failures, literacy screening scales, development estimates by States, 1960.....	14949
functional literacy and basic work skills training for unemployed—	4587
hearings.....	17325
reports.....	17278, 18913
<b>Illness, see Sick.</b>	
<b>Ilmenite:</b>	
floatation from Virginia saprolite and unweathered diorite ore.....	5498
titaniferous iron deposit, Cebolla Creek, Gunnison County, Colo., diamond-drill sample data statistical analysis.....	14508
<b>ILO, see International Labor Organization.</b>	
<b>Image interpretation task, status report, June 30, 1962.....</b>	16330
<b>Imle, Ernest P., relief.....</b>	11782
<b>Immer, John R., starting and managing small building business.....</b>	1491
<b>Immersion, partial, cold water, effects on man in Arctic.....</b>	18483
<b>Immigration and emigration:</b>	
immigration to United States, brief account.....	15631
investigation—	
authorization, report.....	6255
report on findings.....	8052
<b>Israel—</b>	
immigration problems, translations.....	6991
immigration, settlement and Arab minority.....	5354
<b>laws—</b>	
administrative decisions.....	17540
index.....	20748
applicable.....	17544
general information.....	14047
manpower and immigration, report, publications, price list.....	12774
study of population and immigration problems—	
Asia.....	296
manpower in U.S.....	296
United States.....	296
world.....	296
<b>Immigration and Naturalization Service:</b>	
I & N reporter.....	3775
interim decisions.....	3793
<b>Immunity:</b>	
antivirus, ionizing radiation effect, cold environment interrelationship.....	14908
radiation illness, irreversible damage lowering immunobiological resistance, USSR study.....	10853
<b>Immunization:</b>	
autovaccination factors of body in burns, USSR study.....	17891
immunogenic properties of some fractions of causative agents of plague, USSR study.....	17682
information for international travel.....	21087
Memphis and Shelby County, Tenn., status of 2-year olds.....	16509
<b>Immunology:</b>	
acute radiation injury, USSR study.....	8979
embryogenesis, USSR study.....	954
journal of microbiology, epidemiology, and immunobiology (USSR periodical), translations.....	15933
<b>Impact:</b>	
acceleration technology for aviation crash injury prevention, synthesis.....	18353
bibliography.....	18354
hypervelocity, impact ionization effect.....	18165

Entry	Entry
<b>Impact—Continued</b>	
noise control in multifamily dwellings, guide.....	8235
properties of maraging steel compositions.....	18249
survival of extreme vertical impact in seated position.....	4504
textiles, phenomena.....	3307
<b>Impedance:</b>	
commercial Leclanché dry cells and batteries.....	14600
electrically short antennas in ionosphere.....	5581
mechanical—	
simulation in shock and vibration testing.....	16389
X-259 rocket motor study.....	14549
pneumograph calibration, thoracic cage measurements.....	16801
<b>Impellers, pump, method for design using high-speed digital computer.....</b>	3150
<b>Imperial County, Calif.:</b>	
land withdrawal at Chocolate Mountain Aerial Gunnery Range—	
law.....	17049
reports.....	11805, 17264
<b>Imperial Valley, cotton, supply functions.....</b>	8155
<b>Importers, commercial, exporting to United States.....</b>	12032
<b>Imports:</b>	
airborne, foreign trade reports.....	3730-31
detentions, food, drug, and cosmetic products, report.....	12147
fact sheet.....	10058
foreign trade—	
reports.....	3727-28
summary reports, monthly.....	4262-64, 4266
free and dutiable goods, 1961.....	2399
statistical classification—	
schedule A.....	7748
commodity numbers, revisions, 1962.....	9729
schedule T, changes.....	7749, 9713
total trade, summary reports, monthly.....	4266
trade, summary reports, monthly—	
by commodity.....	4262
by country.....	4263
by customs district.....	4264
U.S. commodities as related to output, 1961 and 1960.....	4595
see also Commerce—Tariff—also names of countries, etc.—also names or classes of articles imported.	
<b>Impregnated cathode.....</b>	1778
<b>Improving home and family living among low-income families.....</b>	10304
<b>In-core power monitoring of nuclear reactors.....</b>	7692
<b>In these hands, story of air traffic control.....</b>	6395
<b>In vitro performance of stannous fluoride prophylaxis paste and topical solution, alone and in combination.....</b>	4416
<b>In vivo method to measure relative blood viscosity and factors associated with hindrance.....</b>	7631
<b>In your service, work of Uncle Sam's forest rangers.....</b>	16730
<b>Incentive awards, see Rewards (prizes, etc.)</b>	
<b>Incentive payments, material incentives on collective farms, USSR study.....</b>	2723
<b>Incinerators, human waste disposal.....</b>	18473
<b>Income:</b>	
aged, State variations.....	1500
British National Incomes Commission, functions and problems, etc.....	19804



# INDEX 1963

Entry	
Income—Continued	
consumer expenditures and income, 1960—	
Atlanta, Ga.	1166, 7151
Austin, Tex.	7156
Baltimore, Md.	7160, 12786
Boston, Mass.	1167, 7152
Buffalo, N.Y.	9050
Cedar Rapids, Iowa	10890, 14455
Champaign-Urbana, Ill.	12790, 14459
Chicago, Ill.	1165, 7150
Cincinnati, Ohio	18031-32
Cleveland, Ohio	12787-788
Dallas, Tex.	10892, 14457
Detroit, Mich.	7145-46
Gallup, N. Mex., Klamath Falls, Oreg.	16274
Indianapolis, Ind.	7154, 14452
Los Angeles, Calif.	12789, 14458
New Jersey, northern	7157, 12784
New York, N.Y.	1164, 7149
Orlando, Fla.	10891, 14456
Philadelphia, Pa.	5437, 12782
Pittsburgh, Pa.	7155, 14453
Portland, Maine	7158, 14454
St. Louis, Mo.	7159, 12785
San Francisco, Calif.	7147-48
Seattle, Wash.	7153, 12783
small cities in southern region, Cleveland, Tenn., etc.	14460
Washington, D.C.	1163, 14451, 16273
consumer expenditures and income, 1961—	
Dayton, Ohio	19788-789
Hartford, Conn.	19790-791
Nashville, Tenn.	19786-787
consumer income, series	6002, 20359
effects of proposed quality stabilization act, summary analysis	20449
elderly population, statistics	15086
families and persons—	
in U.S.	6002, 20359
trends, 1947-60	13304
family—	
average, 1962	13300
in relation to selected health characteristics, United States	16538
low income families in low rent public housing, cooperative extension service work	20862
farm—	
costs and returns, 1961, commercial cotton farms	2123
costs and returns, 1962—	
commercial corn belt farms	8146
commercial cotton farms	12046
commercial egg producing farms, New Jersey	10050
commercial tobacco farms, North Carolina	12045
commercial wheat farms, Pacific Northwest, Northern and Southern Plains	15413
parity standards for agriculture, reporting for social security credit	18314
situation	3639
statistics, how to use	9584
low-income housing demonstration program, guide	12240
low, parents, helping through parent education groups and homemaking consultants	15090
money income of aged by marital status, etc.	14699
money value of an education	3036
neighborhoods	5453-57, 7171-77, 9066-77, 10912-921
older people, 1960-61	20247
railroads, selected items	4182
retirement, of the aging, hearings	825, 2084

Entry	
Income—Continued	
tax returns statistics—	
business, 1960-61	2376, 14087
corporation, 1960-61	15644
individual, 1961	15645
USSR, relationship between national income and State budget	12313
see also subject from which income is derived.	
Income tax:	
aliens—	
dual-status tax years, guide	10316
information guide	10320
aspects of national tax policy (remarks)	20209
corporate tax rate, extension—	
hearing	13801
law	18426
reports	11831, 11840, 13718
Cyprus, act of 1961, foreign persons	846
deductions—	
business, travel, entertainment and gift expenses, questions and answers	15643
child-care expenses in case of woman deserted by husband—	
law	7823
reports	4744, 6277
employee pension plans, provisions of P.L. 87-863	1498
organizations, contributions to which are deductible, list	17549
redeemable ground rent payments—	
hearing	6293
law	7828
reports	4741, 6280
self-employed retirement act of 1962, provisions	1497
travel and entertainment expenditures, testimony of commissioner of internal revenue	8104
disposition of property pursuant to orders enforcing antitrust laws, report	4745
double taxation—	
agreement with, India	20522
convention with—	
Japan, protocol	20525
Norway, ratification, report	20535
foreign scholars and visitors on official educational and cultural exchange programs, tax advice	10319
Foreign Service personnel, deductions, guide	10315
Fulbright awards, information guide	10314, 12248
history of Internal Revenue Service, 1862-1962	6580
Individuals, 1963	631
Internal Revenue Service collection, brief history	17552
IRS looseleaf regulations system, 628, 2372-73, 5062-54, 8371, 10323-324, 12249, 14062-63, 15637-639, 17550, 19349-350, 20755	
missing persons, amend act, report	13536
municipal, withholding by Federal agencies, amend internal revenue code, report	4747
new depreciation guidelines, realistic and flexible	1445
nonprofit corporations, mutual deposit guarantee funds, exemption, report	13580
nonresident aliens, preparation of Form 1040B, information guide	10318

# JANUARY-DECEMBER

	Entry
Income tax—Continued	
President's tax proposals	
Administration's economic program (remarks)-----	18356
Administration's tax programs, changing directions in national tax policy (remarks)-----	16634
benefits and overall impact upon our economy (remarks)-----	20215
benefits to economy (remarks)-----	11357
designed to create jobs (remarks)-----	11360
economic stimulus (remarks)-----	9470
expand employment (remarks)-----	14759
objectives (remarks)-----	7499
program and balance of payments (remarks)-----	14760
program in 1963 (remarks)-----	9460
reduction and reform, economic goals (remarks)-----	1576
reduction as stimulus to economy (address)-----	9468
reforms in income tax (remarks)-----	7497
small businessman's stake (remarks)-----	11362
stimulus to construction industry (remarks)-----	7498
tax and expenditures control, key to economic policy in 60's (remarks)-----	5759
tax bill and Federal policy (remarks)-----	21150
tax reduction and revision (remarks)-----	11356
urgent need (remarks)-----	7496
vital to balance of payments (remarks)-----	20214
program, questions and answers-----	20218
reduction and revision-----	
hearings-----	4761, 11015, 20607
message from the President-----	4716
explanation, exhibits, etc-----	4760
small business, impact of proposals-----	
hearings-----	13825
report-----	17242
returns, statistics-----	
business, 1960-61-----	2376, 14067
corporation, 1960-61-----	630, 15644
individual, 1961-----	15645
State, withholding from salaries of Federal employees, regulations-----	20210
travel, entertainment, and gift expenses, 1962 rules for deducting, and new 1963 recordkeeping rules for substantiation-----	6584
Incorporators, see Communications Satellite Corporation.	
Indemnification of research contractors-----	18862
Indemnity, payments to sheep owners in scrapie slaughter program, hearing-----	17158
Independent nonprofit Federal research contractors, staff study-----	6205
Independent offices, see Government offices.	
Index digests:	
Civil Aeronautics Board, cumulative, economic cases-----	15007
consolidated, of L.C.C. reports-----	2447-48, 6631, 12264
decisions, General Accounting Office-----	4996
Index numbers, see subjects, e.g. Economics.	
Indexes:	
Abstracts of recent published material on soil and water conservation-----	5790
Aerospace Research Office, basic research résumés, 1961-62, abstracts-----	7621

	Entry
Indexes—Continued	
Air University periodical index-----	3443
Atomic Energy Commission, annual report-----	11588
bibliography of agriculture, serial publications indexed in-----	11092
broadcasting stations of world-----	
by country and city-----	15546
FM and TV, by country, city, and frequency-----	15548
frequency-----	15547
Civil Defense Office publications-----	15100
civil engineering reports, Coast Guard-----	18743
code of Federal regulations, 1963-----	15501
Commerce Department publications, 1962 supplement-----	18760
congressional committee hearings, Jan. 7, 1959-Jan. 8, 1963-----	13387
congressional record-----	
daily-----	3537
87th Cong., 2d sess., bound volume-----	18765
correlation of AD-PB technical reports-----	4507
Court of Claims, cases decided, v. 140-149-----	8136
Defense Department specifications and standards-----	19079
notice-----	8140
supplement-----	3779
digest of public bills and resolutions-----	3601
diseases, international classification-----	3289-90
echinoides, fishes, and copepoda-----	11114
FAA, manufacturer's identifying number and Government specification type designators-----	2246
Federal Home Loan Bank Board digest-----	2260
Federal register-----	3670
Federal specifications, standards, and handbooks, index-----	6447
supplements-----	3778
Federal supply classification-----	
alphabetic index-----	19074
supplements-----	3676
numeric index-----	
addendum-----	3674
of classes-----	17343
supplements-----	3675
fishery biological papers in non-government publications, 1940-56-----	19226
fishery bulletins, Fish and Wildlife Service-----	2289-91, 4953-54, 15521
fluoride drinking waters-----	7314
hearings on military cold war education and speech review policies-----	2085
Immigration and Naturalization Service, interim decisions-----	20748
index medicus-----	3776
medical subject headings used-----	3892
Interior Dept. Finance Division, appropriation ledgers, 1853-1923-----	16416
keywords, to technical reports, semimonthly-----	3819
Maritime Administration, Maritime Subsidy Board, National Shipping Authority, current regulations-----	10929
medical and health related sciences, thesaurus-----	12998
military periodicals, Air University Library-----	16779
Le Monde-----	787, 8889, 10788, 14347, 15762, 17734, 20892
NASA, technical publications-----	5505-6, 5508
announcements-----	1286
July 1960-Dec. 1961-----	

# INDEX 1968

Indexes—Continued	Entry
National Guard Bureau publications	16422
National Labor Relations Board decisions, v. 105-138	11112
National Museum bulletin 100, v. 14	11114
Naval Training Device Center, publications	3216, 21056
notice to mariners	11141
nuclear energy for space propulsion and auxiliary power, hearings, index	4665
nuclear science abstracts	3979
cumulative report number, with public availability citations	5953
patent abstract series	1959
patents	12968
plastics, technical conference papers	1873, 17353
President's papers—	
Johnson, Andrew	5466
Monroe, James	19311
renegotiation rulings and bulletins	20121
research grants of N.I.H., 1962	11111
research results, Office of Aerospace Research	3981
Russian accessions	3913
scientific and technical aerospace reports	11086
Smithsonian Institution annual reports 1949-1961—	
departmental edition	5719
document edition	4671
La Stampa and La Stampa sera	929, 1068, 1151, 2480-90, 2585, 2816, 2934, 5122, 5100, 5279, 5390, 6094, 6804, 6860, 6932, 8439, 8443, 8504, 8561, 8804, 8905, 9008, 10470, 10641, 12272, 12309, 12507, 12584-585, 12688, 14207, 14292, 14392, 15776, 16023, 16065, 16256, 17603, 17607, 17728, 17756, 17818, 19415, 19424, 19500, 19596, 19657, 19691, 20830.
tuberculosis beds in hospitals and sanatoria	5698
Veterans Administration publications	1582
weather stations	16452
world ports, basic charts and sailing directions	18217
Indexing, nuclear science, conference proceedings	1840
India:	
accessions list, Library of Congress American Libraries Book Procurement Center, New Delhi	7182
agricultural commodities, agreements	3363, 9408, 11328, 16606, 21128
agricultural trade, agreement	14718
around world with Bob Poage, report on recent trip to	2046
Daniells in India, traveling exhibition, catalog	3327
dispute with China, Swiss comment	2768
double taxation, agreement	20522
economic developments, 1962	8304
education, selected bibliography	8182
educational foundation and financing of exchange programs, agreement	16601
equatorial balloon flights, agreement	3352
food consumption, etc., compared with Japan and U.S.	2134
foreign trade, 1961-62	6620
foreign trade regulations	20757
growing market for U.S. products and investments	5088

India—Continued	Entry
Indian Ocean expedition—	
agreement	14721
International Meteorological Centre, agreement	11391
investment factors	6590
military assistance, agreement	3354
Peace Corps program, agreement	7450
Radiation Medicine Centre, materials and equipment, agreement	11308
scientific activities organization	3193
Sino-Indian conflict	1789
Sino-Indian conflict region, visit	5146
transportation facilities development termination, agreement	13077
Indian Ocean expedition—	
elementary teachers, examination announcement	1943
field and central offices, directory	3605
press releases	4080
Indian Claims Commission:	
appropriations, 1961—	
law	15159
reports	7939, 11931
cases before, revolving fund to finance assistance, reports	13593, 17269
Indian lands:	
heirship, problem—	
hearings	12020
report	17277
Interior Department decisions, digest	20749
leasing act, amend, report	17259
see also names of Indian tribes or reservations.	
Indian Ocean:	
bacteriogenic formations of iron-manganese concretions, USSR study	15799
larvae of mackerel-like fish, USSR study	14186
lights and fog signals, list	9259, 19989
mackerel- and tuna-like fishes, preliminary field guide, National Museum	16430
meteorological research, agreement with India	14721
notice to mariners	3973
radio navigational aids, 1962 changes	7355, 18216
seismo-acoustic radiobuoys for studying earth's crustal structure in area, USSR	8784
tide tables	16119
Indian Ocean Expedition, see International Indian Ocean Expedition.	
Indian reservations, water supply (series)	5033
see also names of reservations.	
Indiana:	
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics	4566
climatological data	3517
cooperative wool marketing	17416
county business patterns, activities covered by OASDI program	15049
electric rate book	15494
5B redevelopment area, statistical profile	11695
mineral industry, minerals year-book chapter	1214
northwestern, census of housing, 1960, standard consolidated area, components of inventory change	1905
150th anniversary of admission as State, commemorative medals, amend act, report	18847

# JANUARY-DECEMBER

	Entry
Indiana—Continued	
population, 1960, characteristics	18650
precipitation data, hourly	3771
public school finance program, 1962-63	17388
women workers, 1960	18372
ZIP code directory	20038
Indiana Farm Bureau Cooperative Association, Inc., Wool Department, organization and operations	17416
Indiana Harbor:	
improvements, engineer report—departmental edition	2190
document edition	2005
port, harbor conditions, etc.	2215
Indianapolis, Ind.:	
consumer expenditures and income, 1960	7154, 14452
consumer practices in handling and storing frozen foods, etc.	16742
electric facilities of area, map	517, 2266
income, education, and unemployment in neighborhoods	10913
occupational wage survey—departmental edition	7165
document edition	6076
Weir Cook Airport, weather observations, hourly, decennial census	11392
Indiana:	
adult vocational training and employment, amend act, report	17260
Anchorage area, Alaska, information digest	14061
answers to questions about American Indian	19344
code of Federal regulations	6427
constitutional rights, hearings	2098, 12023
dental services, presentations to Council of Federal Dental Services	9349
education, statistics, 1962	2366
engineer in health program	11232
hand craft book series	15632
health program of Public Health Service	11239
review, hearings	15314
health programs, free medical services to individuals able to pay, GAO report	12206
Indian education (periodical)	14048
Indian leader (periodical)	3783
Indian school journal (periodical)	8784
Latin America, aboriginal cultural development	14695
Peruvian, native to high altitude, thermal and metabolic responses to cold	18478
publications, price list	18279
purchase of goods from Govt. employees, amend law, report	20579
revolving fund, assistance in cases before Indian Claims Comm. reports	13583, 17269
social and economic statistics, census of population, 1960	18702
unemployment survey, questionnaire returns	15316
young, higher education aids	5045
see also names of reservations or tribes	
Indicators, devices for radar stations, USSR study	19563
see also Liquid level indicators	
Indictments, defective, reindictment after dismissal, amend U.S. Code, report	15257
Indium, effect on solid solubility of calcium and silicon in magnesium	5496

	Entry
Indochina, economic geography, etc., of French military territory, French study	17609
Indonesia:	
agricultural commodities, agreements	7452, 16603
around world with Bob Poage, report on recent trip to	2046
Communist Party, Aidit's political report	12400
Dekon (economic declaration) and conditions for its implementation (lecture)	14235
economic developments, 1962	8404
exports and imports, licensing and exchange controls	5076
general information fact sheet	13063
health information for travel	16498
International Communist developments, translations	7001, 7077, 14374
Japanese military administration, joint Indo-United States balloon flight program, 1961	19661
labor conditions	13197
labor in Indonesia, BLS report	18049
national army, development and problems, etc.	20927
plant import requirements	12275
population	1654
press, abbreviations and terms used, glossary	14201
Indonesia, press survey	20775
983, 1152, 2748, 2965, 5357, 7033, 8562, 8865, 10412, 10737, 12381, 12631, 14146, 14365, 15834, 16146, 17644, 17873, 19414, 19595, 20790	730, 6790, 10737, 14365, 17873
role at conference on formation of Malaysia federation, German studies	17684
Indo-Pacific Fisheries Council, establishment, agreement	5731
Inducers, flat-plate helical, cavitation and noncavitation performance	1281
Induction (military service), see Conscript.	
Industrial arbitration:	
railroad labor dispute—arbitration board to settle—law	17038
reports	17131, 132
message from the President	17257
see also Collective bargaining	13466
Industrial Biochemicals, Inc., adjustment assistance petition, Tariff Commission, report	14742
Industrial College of Armed Forces:	
correspondence course offered on economics of national security	20759
application information	14082
information booklet	19372
National Security Seminar—information guide	15663
presentation, outlines and reading list	642, 17572
Industrial diamonds, see Diamonds.	
Industrial diseases, see Occupational diseases.	
Industrial education, coded occupational titles, list	10063
see also Technical education.	
Industrial hygiene, see Hygiene.	
Industrial Hygienists:	
examination announcement	16938
handbook on medical aspects of radiation accidents	11589
Industrial management:	
Arkansas sawmills, staffing needs	1457
improving by automation	2534



# INDEX 1963

	Entry
Industrial management—Continued	
Southeastern vegetable processing problems, 1960	5829
Soviet firms in system, translation	2819
Industrial organization, see Organization in industry.	
Industrial plants, see Plants (industrial).	
Industrial production, see Production.	
Industrial property, see Patents.	
Industrial Property, International Bureau for Protection of, see International Bureau for Protection of Industrial Property.	
Industrial relations:	
bibliography, labor-management relations	12775
BLS studies, July 1953-62, directory	1180
continuity of corporate management in event of nuclear attack	11652
coordinated public and private action in meeting developing problems (address)	3010
exportability of American system	10922
featherbedding, work rules, restriction of output, selected references	13014
jurisprudential view of NLRB policy (address)	21038
labor-management agreement coverage of wages and related benefits of industries—departmental edition	3024
document edition	1977
labor management relations— and government responsibilities (address)	5426
role of Labor Department, references	14442
Taft-Hartley act, national emergency disputes, 1947-61	5436
labor-management reporting and disclosure act—	
bonding requirements, investigation, hearing	11891
employer and consultant reporting	12777
financial reporting, BLMR guide	5431
informational documents	18021-22
union safeguards	18024
major agreement expirations and reopenings in 1963	3037
manpower utilization and job security (address)	5427
national labor relations act— board, and critics (address)	19971
layman's guide to basic law (address)	3181
view from construction site (address)	5630
National Labor Relations Board and stare decisis (address)	7321
NLRB policy toward current changes and developments (address)	21039
Post Office Department and AFL-CIO, agreement	9324
President's Missile Sites Labor Commission report	20083
progress and accommodation in NLRB legal problems (address)	16429
publications, list	3959
research opportunities, outline of possible topics	14445
role of the press (address)	10883
Industrial Relations Research Association, papers from annual meeting, excerpts	10922
Industrial safety, see Safety of life.	
Industrial security, see National security.	

	Entry
Industrial security manual for safeguarding classified information	4796
Industrial Tractor Parts Co., Inc., relief	18814
Industrial waste, see Waste products.	
Industrial workers, see Labor.	
Industries, see Industry—also names of industries.	
Industry:	
aircraft and missiles, research and development, 1956-61	11132
atomic power program, positive approach to participation (remarks)	143
attracting new growth and new jobs in community	7656
buying motives and intentions, new indicators (speech)	11688
classification manual, supplement	9702
color identifications	1332
combined effect of high-frequency electromagnetic field and X-ray, USSR study	17814
Communist China, translations	20861
credit expansion relations between State banks and industrial enterprises in Republic of Vietnam	2732
current industrial reports	158-159, 1888-95, 3574-75, 4578-84, 5994-97, 7750-60, 9714-23, 11615-630, 13287-298, 15057-70, 16890-899, 18679-898, 20350-858
developing home grown industry—development, papers prepared by United Nations conference	5904
Ecuador, industrial development law	2437
electronics, broad road to, USSR study	5064
employees, occupations, census of population, 1960	10517
employment growth since World War II	155
Estonian SSR, development	16267
financial and operating ratios	5332
foreign countries, prices, economic policies and practices, materials	1471
funds for research and development, 1960, final report on survey—growth through technology (addresses)	20448
heavy—	12934
East European, translations	4649
741, 786, 797, 894, 950, 974, 1014, 1039, 1064, 1127, 1146, 2507, 2684, 2702, 2796, 2855, 2966, 5163, 5255, 5364, 6657, 6836, 6918, 6960, 6986, 7043, 7102, 8496, 8501, 8548, 8623, 8746, 8793, 8872, 8994, 10370, 10438, 10492, 10582, 10647, 10691, 10748, 10755, 10850, 12351, 12455, 12500, 12571, 12618, 14191, 14317, 14421, 15712, 15869, 15997, 16047, 17585, 17879, 17962, 19381, 19671.	723, 974, 1146, 2855, 6657, 7043, 8623, 10370, 10647, 10850, 12571, 14421, 16047, 19381,
North Korea development, policy of Labor Party	16137
industrial development bond financing, intergovernmental relations	14813
industry and opportunity in Italy, report of 1962 U.S. Industrial Automation Mission	5060
industry reports	3511, 3552, 3557, 4121
industry survey	3785



# JANUARY-DECEMBER

Entry

1796

1814

132

143

656

688

702

814

861

732

59,

84,

23,

70,

50-

904

137

964

517

155

267

332

71

148

34

49

23,

74,

16,

55,

57,

10,

71,

11,

37

13

30

1,

35

## Entry

Industry—Continued	
labor force, civilian, experienced,	
census of population, 1960,	
supplementary reports	1881
leader in development of national	
economy, Communist China	
translation	14306
light, USSR enterprises, capital	8712
modernization, New York State	
regional conference, report	18630
mortality among men, ages 20-64	20114
national considerations on develop-	
ment of industrial technology	
(address)	4651
older workers, performance in re-	
training programs	14475
pamphlets	5766, 20229
pine lumber, Mississippi	1469
private, role in atomic energy de-	
velopment (remarks)	18611
research and development and in-	
novation, inquiries into	11131
research and development, 1962,	
preliminary report	18212
safety—	
fundamentals of accident preven-	
tion	3016
mechanical and physical haz-	
ards series	1156
organization and administration	
series	3016
static electricity	12780
significance of cybernetics in GDR	10506
small suppliers and large buyers,	
survey of relations	1459
standard industrial classification	
for use in distributive educa-	
tion	17394
Thailand, industrial promotion	
act	2424
TVA area, development, 1962	14744
U.S. industrial outlook for 1963	7743
USSR—	
design practices, need for im-	
provement	19680
North, development, and trans-	
portation	678
optimum planning of geographi-	
cal distribution, methodologi-	
cal problems	19623
output index based on production	
cost norms	19538
technical developments in light	
industry	19456
turnover funds of enterprises,	
analysis of use	19734
USSR development, translations—	
automotive industry	690,
2806 2999, 6748, 8720, 8744,	
8967, 10657, 12553, 12737,	14221,
14389, 15669, 15749, 15826,	
16127, 16196, 19480, 19724,	
Moskovich, compact car	14314
chemical industry	698,
919, 1072, 1076, 2477, 2872,	
2848, 2978, 5198, 5262, 6684,	
6799, 6886, 6933, 7039, 7052,	
7082, 7106, 7116, 8473, 8551,	
8770, 8881, 8899, 8940, 8978,	
9004, 10511, 10552, 10611,	
10648, 10815, 12297, 12408,	
12423, 12452, 12521-522, 12626,	
12694, 12704, 14111, 14145,	
14199, 14262, 14265, 14272,	
14324, 14332, 14369, 14373,	
14410, 15676, 15689, 15693,	
15746, 15858, 15866, 15882,	
15887, 15927, 15948, 15967,	
16001, 16027, 16038, 16044,	
16048, 16061, 16066, 16093,	
16196, 17579, 17654, 17712,	
17723, 17877, 17932, 17955,	
19478, 19596, 19640, 20786,	
20844.	

## Entry

Industry—Continued	
USSR development—Continued	
chemical machine building	867,
728, 763, 805, 2771, 3155, 6918,	
7113, 8648, 10494, 10526, 10617,	
10843, 12840, 12427, 14267,	
15764, 15821, 15914, 17584,	
17623, 17649, 19573, 20806,	
construction machinery	870,
769, 860, 961, 1094, 2680, 2770,	
6834, 8493, 8602, 8647, 8729,	
8863, 10616, 10842, 14130, 15766,	
15819, 15903, 17670, 17819,	
19461, 19568.	
electrical equipment	750,
966, 1003, 1053, 2589, 2896,	
2944, 5170, 8526, 8552, 8595,	
8612, 8627, 8684, 8828, 8918,	
8975, 10679, 10716, 10802, 10814,	
12416, 12549, 12648, 14124,	
14168, 14210, 14264, 14302,	
14359, 14372, 14411, 15727,	
15756, 15886, 15894, 16017,	
16079, 16128, 16217, 17588,	
17594, 17632, 17652, 17742,	
17760, 17875, 17889, 17960,	
19437, 19719.	
ferrous metallurgy	746,
848, 920, 1010, 2458, 2679, 2685,	
2768, 2872, 2916, 2943, 5304,	
5349, 6842, 7022, 7051, 7083,	
8505, 8543, 8580, 8653, 8942,	
10426, 10480, 10496, 10512,	
10519, 10575, 10587, 10632,	
10651, 10678, 10830, 12286,	
12454, 12509, 12554, 12703,	
12706, 12748, 14087, 14178,	
14219, 14385, 15687, 15778,	
15812, 15835, 15895, 15917,	
15938, 15957, 15970, 16004,	
16181, 16167, 16178, 17614,	
17698, 17718, 17743, 17764,	
17798, 17831, 17844, 17972,	
18008, 19572, 19608, 19621,	
19669, 19744, 20838.	
food processing machinery	7120
machinery industries	19684, 19721
metalworking equipment	838,
879, 907, 1007, 1132, 2601, 2924,	
2998, 6785, 6890, 8660, 10387,	
10423, 10507, 10636, 10783,	
12326, 12428, 12510, 12604,	
12708, 14283, 14358, 15703,	
15811, 15971, 16016, 16106,	
16246, 17575, 17608, 17773,	
17858, 17887, 19404, 19551,	
19656, 19761, 19768.	
nonferrous metallurgy	685,
1052, 2628, 2907, 5200, 5202,	
5367, 6652, 6665, 6883, 7023,	
7056, 8579, 8711, 8771, 8921,	
10576, 10784, 12323, 12503,	
12581, 12698, 14134, 14171,	
14222, 14256, 15681, 15820,	
15915, 16067, 17638, 17706,	
19576, 20781.	
power machinery	1020,
2480, 2769, 5353, 7103, 8492,	
10618, 12285, 14271, 15713,	
15806, 15824, 17653, 17973,	
19570.	
precision equipment	886,
1006, 1044, 1109, 1120, 2460,	
2611, 2644, 2751, 2758, 2958,	
6724, 6944, 7021, 7054, 7081,	
8464, 8734, 8922, 8931, 8957,	
8974, 8995, 9002, 9013, 10532,	
10553, 10718, 10782, 10847,	
12421, 12607, 12649, 12749,	
14118, 14123, 14126, 14263,	
14266, 14287, 14422, 15690,	
15761, 15724, 15761, 15797,	
15823, 15837, 15848, 15859,	

# INDEX 1963

Industry—Continued	Entry	Infants:	Entry
USSR development—Continued		care in fallout shelters—	
precision equipment—continued		aged 1 month and older.....	11642
15873, 15898, 15919, 15939,		newborn.....	11643
15945, 15972, 16005, 16019,		el primer año de vida de su bebe.....	16916
16039, 16064, 16130, 16144,		encephalograms, recording tech-	
16161, 16165, 16174, 16193,		niques, USSR study.....	1082
16200, 16222, 16244, 17589,		immunization status of 2-year olds,	
17616, 17635, 17642, 17664,		Memphis and Shelby County,	
17719, 17722, 17775, 17797,		Tenn.....	16509
17931, 19528, 19571, 19720		infant care—	
refrigeration machinery.....	694,	Children's Bureau publication.....	13310
2633, 8968, 10561, 14388, 15704		publications, list.....	16489
regional economy.....	681,	story of development of best-	
979, 1008, 1081, 2722, 2748,		seller.....	15093
2820, 2853, 2860, 3008, 6663,		mientras su bebe esta en camino.....	6014
6793, 6877, 8676, 8855, 8902,		mortality statistics, 1960.....	13031
10462, 10504, 10821, 12284,		pathology of newborn children,	
12502, 12553, 12712, 12730,		primary problems, USSR study.....	5261
14257, 14282, 14285, 14320,		Infection:	
15771, 15830, 15850, 15856,		focus, epidemiological investigation,	
15861, 15867, 15891, 15993,		USSR study.....	16010
16029, 16056, 16101, 16107,		parasitic, OTS bibliography.....	18629
16125, 16216, 16220, 17586,		pathologic physiology of infectious	
17626, 17795, 17852, 17861,		process, USSR study.....	8550
17884, 17974, 19552, 19569,		resistance, cold environment inter-	
19670, 19686, 19743, 20854,		relationship.....	14908
20906,		Infectious diseases, see Contagion and	
tractors and agricultural ma-		contagious diseases.	
chinery.....	840,	Infiltration, see Water.	
872, 902, 978, 1009, 1106, 2473,		Indammable materials, flammability	
2635, 2782, 2919, 2939, 5190,		of trichloroethylene.....	5502
5343, 6654, 6664, 7010, 8675,		Inflation (finance):	
8743, 8985, 10381, 10422, 10540,		administered prices, compendium	
10602, 10664, 12283, 12325,		of public policy.....	10018
12551, 12643, 14132, 14138,		growth and inflation (address).....	10181
14255, 15695, 15702, 15757,		impact of rising prices on younger	
15792, 15795, 15807, 15822,		and older consumers (re-	
16018, 16126, 16198, 16221,		marks).....	18046
16228, 17660, 17750, 17765,		Influenza:	
17804, 17998, 19694, 19715,		dispensary treatment problems,	
20791, 20821, 20873, 20898		USSR study.....	19438
wage and union scale studies, 1950-		fluorescent antibody research, USSR	
June 1963, directory.....	19796	articles.....	15846
wage surveys—		Influenza vaccine, live, results of	
basic iron and steel.....	5450	USSR study.....	6859
bituminous coal mining.....	19794	Information, see Public Information.	
communications—		Information bulletins, see names of	
departmental edition.....	1171	departments, etc., issuing bul-	
document edition.....	276	letins.	
electric and gas utilities.....	19793	Information Office, Agriculture Dept.:	
fertilizer manufacturing.....	14473	appropriations, 1964, hearings.....	9921
flour and other grain mill		congressional guide to information	
products—		services.....	2367
departmental edition.....	1168	congressional list (series).....	17545
document edition.....	273	Information retrieval list.....	10104
leather tanning and finishing.....	14478	Information services:	
machinery manufacturing.....	9061	Agriculture Department, congres-	
pulp, paper, and paperboard		sional guide.....	2367
mills—		Commerce Dept., Cooperative Of-	
departmental edition.....	1170	fices.....	7807
document edition.....	275	informational media guarantees,	
southern sawmills and planing		agreement with Guinea.....	9406
mills.....	12807	PACAF basic bibliographies.....	11511
wood household furniture.....	16290	sources of information on American	
wool textiles.....	18041	firms for international buyers.....	17562
welfare and pension plans, statis-		VA fact sheet, IS series.....	11373
tics.....	7140	world trade—	
100 largest plans, 1959-61.....	18020	economic reports.....	2418-26
see also names of industries.		operations reports.....	2427-34
Industry manpower surveys.....	13874	statistical reports.....	2435
Inelastic design of load carrying		Information sources on international	
members.....	9637	travel.....	3389
Inertia, Moments of, see Moments of		Information specialists, examination	
inertia.		announcement.....	9741
Inertial guidance:		Information storage and retrieval	
navigation systems, USSR study.....	7099	systems:	
reentry to earth's atmosphere, in-		algorithm for organization of infor-	
ertial navigation errors.....	11052	mation, USSR study.....	2937
Infantile paralysis, see Poliomyelitis.		bibliography.....	9707

	Entry
Information storage and retrieval systems—Continued	
foreign developments, translations	2981
8478, 8651, 8765, 8817, 10754, 10809, 10852, 12383, 12484, 12701, 12721, 14097, 14148, 14195, 14254, 14321, 14341, 14368, 15825, 15992, 16226, 17582, 17703, 17802, 20819	
algorithm for recognition of machine-written symbols	875
bibliography	14603
computer and information technology	19748
machine translation and language reform	10465
new electronic equipment for printing industry	826
Russian-Chinese systems, comparison of old and new programs	8691
in current use	3316
Information Systems Branch summaries	18224
scientific conference on learning automatic machines and information processing in organisms, West Germany	7071
transistorized control systems using piezoelectric substances, USSR study	5211
USSR developments	2659
USSR makers of memory device, press interview	2509
Information Systems Branch, ONR, information systems summaries	18224
Information theory:	
acoustical space-time information processing	7365
using for studying human abilities, USSR study	17622
Information transfer efficiency of wideband communications systems	7595, 9598
Informational media guaranties, agreement between U.S. and Guinea	9406
Infrared horizon of planet earth	18146
Infrared rays:	
atmospheric band absorptions, interpolation procedure for calculating from laboratory data	12902
band model for radiation absorption by water vapor, USSR study	19545
metals, infrared properties, theory	9149
errata	19005
nondestructive testing technology—quantum generators and "death rays", USSR study	18263
Infrared spectra, see Spectra.	17901
Infrared spectrophotometry, see Spectrophotometry.	
Infrared spectrum, see Spectra.	
Ingols, see names of metals.	
Ingram, William M., water pollution control, sewage treatment, water treatment, selected biological references	20110
Inheritance and transfer tax:	
credit against estate tax for tax on prior transfers, report	4740
Federal estate and gift taxation guide	15636
IRS looseleaf regulations system	15640
Inhibitors, corrosion, multipurpose	21064
Injectors:	
adapted for gaseous hydrogen, performance of single fuel-vaporizing combustor	10975
comparison with 200-pound-thrust ammonia-oxygen engine	5528
fuel, effect on performance of annular turbojet combustor	14529

	Entry
Injectors—Continued	
principles in 2400-pound-thrust rocket engine using liquid oxygen and liquid ammonia, evaluation	10987
tree, field trials for weeding in West Virginia	20701
Injunctions, State anti-injunction laws, major provisions, discussion	9036
Injuries:	
acute conditions, incidence and associated disability, U.S., July 1961–June 1962	14675
caused by ice formation in feet of mice, observations and evaluation	1756
coal mines, monthly report	3519
coal mining, 1960, analysis of safety factors, etc.	1207
disability days as result, U.S. statistics, July 1959–June 1961	5687
fabricated structural steel and architectural metalwork industries	1155
family income in relation to disability days, hospital discharges, etc., United States	16538
fuel industries, minerals yearbook chapter	19820
home, persons injured, type and associated disability, U.S. statistics, July 1959–June 1961	5686
lightplane crashes, causative factors	3384
medical statistics, Navy 1961	18061
metal and nonmetal industries, minerals yearbook chapter	19830
metal industries, experience	16323, 18073
mineral industries, minerals yearbook chapter	1200, 20946
nonmetal industries, except stone and coal, 1959	19835
occurring in electron microscope objects under action of electrons, USSR study	15782
oil and gas industry, 1962	20944
organization of medical treatment, USSR	5194
orthopedics, traumatology, and prosthetics (USSR periodical), translations	15781
persons injured at work, U.S., July 1959–June 1961	5688
persons injured in motor vehicle accidents and associated disability, U.S., July 1959–June 1961	7402
quarrying industry	14409, 16322
radiation, treatment of animals with combination injuries, USSR study	10551
rates in manufacturing industries, reporting work injuries under PL 85-742, helpful hints for employers	3790
sawmills, survey, 1956-57	16270
skiing injuries	16275
traumatic clinic, reanatomy problems, USSR study	14672
using injury statistics	19517
USSR, atomic bomb explosions, translations	12779
work injuries and work-injury rates in hotels	16145
see also Accidents.	1160
Inland waterways:	
Great Lakes-Hudson River, improvement, complete, hearing	19068
waterborne commerce, 1962	19148-150

# INDEX 1963

	Entry
Inland Waterways Corporation:	
act, repeal—	
hearing	10007
law	15146
reports	11811, 11977
audit report, 1962	2319, 7845
Inlets, see Air inlets (aircraft).	
Inner Mongolia, China, see Mongolia.	
Inner Mongolian Autonomous Region, see Mongolia.	
Inner tubes:	
Federal item identification guides for supply cataloging, supplements	3652
industry, output per man-hour, indexes, 1947-60	1188
Inorganic chemistry, USSR, developments	5231
Inorganic compounds:	
catalysts, bibliography	1872
current industrial reports	1890, 1892, 3574, 7757
Inquiries into industrial research and development and innovation	11131
Insect attractants, see Insect traps.	
Insect pests, see Insects.	
Insect repellents:	
effect on plastics, paints, and fabrics	1623
mosquito, factors affecting protection period	13189
orally effective mosquito repellent, progress report	14950
termites, field evaluation	11188
Insect traps:	
electric, for survey purposes	7543
materials tested as attractants	14851
Insecticides:	
aerial application, problems, effects of chlorinated hydrocarbons on substrate-linked phosphorylation	16866
codling moth, bioassay of toxicity of residues	20261
control of California red scale, screening tests	18394
diesel oil as solvent, toxicity to fir cones	17485
Federal insecticide, fungicide and rodenticide act, amend—	
hearings	18917, 19041
report	19034
laboratory tests at Brownsville, Tex	18392
minimize injurious effects, hearings	15324
narcissus bulb fly damage prevention	11454
notices of judgment	9649, 16718
organophosphorus, selective toxicity, problem of mechanism	16156
recommendations for control of insects attacking crops and livestock, 1963	7557
residues on grapes and in wines, studies	4337
see also Pesticides.	
Insects:	
affecting health and comfort of man, classification and coding systems for compilations from world literature	1437
anatomy, contribution toward encyclopedia	16561
causing losses to western white pine cones	572
control—	
cabbage, in home garden	7566
crops and livestock, insecticide recommendations for 1963	7557
home orchards and vineyards	9547
home vegetable garden	11452
house plants	14853
in nursing homes	13010

	Entry
Insects—Continued	
control—continued	
insect control series, training guide	14668, 20100
pecan	11448
potato	9570
rough rice	18431
stored grains, sampling methods, for determining insect populations	7584
use of air screens	13158
without conventional insecticides, research	18390
cooperative economic insect reports	8555, 9546
pleiotorial keys	7550
effect of organic phosphorus compounds on, physiological mechanism, USSR study	19389
egg masses, mechanical debairing device	10232
emerging from contaminated water bodies, their radioactive contamination of land, USSR study	6885
forest, conditions in United States, 1962, report	17471
injury to yellow birch seeds and seedlings	20707
intercepted plant pests, list	9548
log cabins, etc., protection in eastern United States	1692
not cause of post-emergence chronic tipburn of white pine in eastern Tennessee	12182
not known to occur in U.S.	9546
pests—	
of peach, east of Rocky Mountains	16732
of plants and animals, control with radioisotopes and radiation, USSR study	16059
protecting raisins during drying and storage with malathion-treated trays	7575
publications, price list	11222
quarantine notices under Plant quarantine act, P.P.C. series	4006
research, large cage design	9539
resistance to ultra-low temperatures, USSR study	8577
tissues, method for cultivating, USSR study	2508
see also Aquatic Insects—also names of insects.	
Insects Affecting Man and Animals Research Laboratory, activities and objectives, general information	16717
In-service training series	7336
Insignia, American military insignia, 1900-51	14607
Inspecting airways	20661
Inspection (industrial):	
public, of fulfillment of plans, USSR study	2772
see also names of substances, objects, etc., inspected.	
Inspection (military):	
sampling procedures and tables, military standard	17349
see also Military supplies—also names of substances, objects, etc., inspected.	
Inspection equipment, design, military standardization, handbook	20617
Inspection services:	
Agriculture Department inspection of processed fruit and vegetables	7587
quality assurance provisions for NASA inspection agencies	1263
suppliers of space materials, parts, components, and services, inspection system provisions	1265



try

109  
448  
570  
431

584  
158  
390  
548  
550

380  
232

385

171  
707  
48

502  
82  
46

32

59

75  
23

100  
39

177  
08

7  
16

17  
11

2

9

7

7

3

5

		Entry
<b>Inspectors:</b>		
aircraft, handbook for aviation mechanics with inspection authorization .....	17425	
customs, guide for sampling seed .....	18149	
<i>see also</i> types of inspectors.		
<b>Installations (military):</b>		
administrative facilities, standards and criteria for construction, Yards and Docks Bureau design manual, change .....	1603	
<b>Air Force—</b>		
payment of insufficient rental by Curtiss-Wright Corporation, Wood-Ridge, N.J., for commercial use, GAO report .....	10262	
structures, definitive designs, change .....	4384	
airfields, rigid pavements, engineering and design, manual .....	4863	
Army, continental U.S., list .....	109, 14943	
commercial life insurance solicitation, Army regulations .....	13236	
construction appropriations, 1964, hearings .....	15298, 17161, 20494	
construction authorization, 1964—		
hearings .....	11880, 19043	
reports .....	11809, 11818, 19032, 20490	
construction, investigational projects, engineering and design, regulation .....	6376	
construction projects, hearings .....	15310	
control of soils in military construction .....	4458	
defense base act .....	393	
defense scrap yard handbook .....	2114	
drawings, military construction, Army and Air Force, engineering manual, change .....	6374	
emergency construction, engineering manuals—		
garbage and rubbish disposal .....	13879	
heating, ventilating, and air conditioning .....	6372	
interior electrical systems .....	17409	
lightning-protection systems .....	6373	
sanitary sewage system .....	17408	
selection of sites .....	434	
structural design .....	19144	
water supply .....	12090	
engineer basic construction principles in theater of operations .....	5919	
engineer functional components system, staff tables .....	13241	
engineering instructions .....	4839	
engineering weather data, Army, Navy, and Air Force manual .....	16828	
flexible pavement design for roads, streets, etc., engineering manual .....	4865	
change .....	19143	
hardened structures to resist effect of nuclear weapons, Air Force design manual .....	11487	
Japan, manpower utilization, GAO review .....	6535	
naval shore activities—		
facility planning factors .....	16698	
maintenance of electric power distribution systems .....	11419	
naval shore facilities, definitive designs .....	9518	
Navy contract with Brown-Raymond-Walsh for Spanish base construction program, failure to recover excessive administrative costs included in negotiated fixed prices, GAO review .....	13994	
Defense Dept., reply .....	20713	
relier well systems, design, engineer manual .....	12088	
specifications, military construction, Engineers Corps, manual change .....	17410	

		Entry
<b>Installations (military)—Continued</b>		
structures to resist effects of atomic weapons, engineering and design manual, change .....	6370	
underground, utilization of nuclear power plants, engineer manual .....	10088	
woodland management .....	9662	
<b>Installation credit:</b>		
commercial banks, holdings, monthly report .....	3547	
consumer credit, monthly release .....	3546	
Institute for Applied Aerodynamics, Technical University in Dresden, facilities for flow investigations .....	16012	
Institute, laboratory, and production, USSR .....	2882	
Institute of Forest Genetics, research, bibliography, 1927-61 .....	2312	
Institute of Inframicrobiology, Bucharest, Rumania: .....		
objectives, etc. ....	8822	
viruses study .....	8863	
Institute of Tropical Forestry, tropical forest notes .....	8294-96	
<b>Institutions:</b>		
California: delinquency research projects experiments with alternates to institutionalization .....	15091	
inmates, social and economic data, census of population, 1960 .....	15085	
serving delinquent children, guides and goals .....	11646	
<i>see also</i> Child welfare institutions.		
<b>Instruction, <i>see</i> Education—Programmed instruction—Teaching.</b>		
<b>Instructors, <i>see</i> Air Force—Teachers.</b>		
Instructor's guide IG series .....	4606, 18714	
.....	11654, 20508	
Instructors' journal .....		
<b>Instrument approach procedure charts, <i>see</i> Maps and charts.</b>		
<b>Instrument flight rules:</b>		
enroute air traffic survey, peak day, 1962 .....	17420	
helicopter IFR capability, mechanical stability and trim augmentation, investigation .....	13100	
IFR altitudes, Federal aviation regulations .....	15473	
<b>Instrument flying:</b>		
instructor examination guide .....	2303	
training, Air Force manual .....	18458-459	
<b>Instrument landing, <i>see</i> Landing (aircraft).</b>		
<b>Instrumental analysis, impurities in rare-earth metals .....</b>		
.....	1237	
<b>Instrumentation:</b>		
geophysics and astrophysics .....	59, 5877, 7618, 9616-17, 18490	
journal of research, National Bureau of Standards .....	3817, 9205, 12895	
radar tracking systems, research .....	12954	
reactors, in-core, telemetering .....	4478	
telemetering transmitters for in-core power monitoring, in-core instrumentation development program, quarterly progress report .....	18573	
<b>Instruments:</b>		
and laboratory equipment, Federal item identification guides for supply cataloging, supplements .....	3656	
building, USSR, news of higher educational institutions .....	8988, 10369, 10522, 10644, 12276, 18855, 17956	
selected, and related products, current industrial reports .....	15066	
<b>Insulating board, <i>see</i> Corkboard—Pulpboard.</b>		



# INDEX 1963

Entry	Entry
Insulation:	Interceptor planes, <i>see</i> Fighter planes.
cable and wire, thermoplastic, Federal standard.....	Interconnections mean more power for all users.....
6446	11255
charring materials for reentry vehicles, influence of heating rate and test stream oxygen content on efficiency.....	Interdepartmental Committee on Children and Youth, report, 1962.....
14573	1922
electric, TFE-durocarbon (polytetrafluoroethylene) resin, standard of trade.....	Interdepartmental Committee on Youth Conservation Corps, establish, report.....
13260	7960
heat and sound proofing materials, production, USSR.....	Interest and usury:
15726	bank rates on short-term business loans.....
sound-insulating capability of ship hull structures, USSR study.....	19203
15953	bank savings, surge, rose with thorns.....
vacuum, investigation of materials up to 4000°F.....	12122
11472	equality tax on foreign securities, impose, description and technical explanation.....
Insurance:	15336
Canal Zone, business report, 1962.....	Interest rates on time deposits, mid-February 1963.....
11602	13935
facts for farmers.....	payments of interest on deposits, Federal Reserve regulation Q, supplement.....
13165	15507
FHA self-insurance on acquired multifamily property, hearing.....	Interest equalization tax act:
13643	hearings.....
hospital, coverage of aged beneficiaries, national survey.....	18962
9304	statement.....
Industry:	21148
employer expenditures for supplementary remuneration practices, 1961.....	Interference, <i>see</i> Radar interference—Radio interference.
18044	Interferometers, single station doppler-interferometer rocket tracking technique.....
15395	3123
management in small retail firms.....	<i>see also</i> Fabry and Perot interferometers—Michelson stellar interferometer.
1481	
publications, price list.....	Intergovernmental relations:
1395	investigation, authorization, report.....
<i>see also</i> types of insurance.	6247
Insurance companies, Canal zone, licensing laws.....	problems of Federal-State-local relations, report of subcommittee.....
11602	8051
<i>see also</i> Life insurance companies.	Intergovernmental Relations, Advisory Commission on, <i>see</i> Advisory Commission on Intergovernmental Relations.
Insured banks, <i>see</i> Banks and banking.	Interior and Insular Affairs Committee, House:
Insured unemployed, personal and economic characteristics (periodical).....	accomplishments, 87th Congress.....
3791	291
Integral equations, <i>see</i> Equations.	calendar.....
Integral neutron thermalization.....	3837
11553	committee prints.....
Intellect, training mind for science and creativity, USSR study.....	6197, 8000, 15316-317, 18947
12650	hearings.....
Intelligence (military science), <i>see</i> Military intelligence.	292-293,
Intelligence Division, Treasury Dept., law enforcement agency, history, etc.....	2051-52, 7998, 13653-656, 15314, 17170-171, 18946, 20499-500.
15635	Investigations and studies—
Interaction of aerosols and air ions.....	authorization, report.....
7197	6109
Interagency Committee on Nutrition Education, nutrition and school lunch, bibliography.....	expenses, report.....
18403	6128
Interagency coordination in drug research and regulation, hearings.....	reports.....
4781, 10014, 19054	6095-96,
Interagency coordination of information, hearings.....	6153, 6164, 6168-70, 7872, 7913-17, 7919, 7923, 7925-26, 7936-37, 7940, 9845, 9861-62, 9867, 9875-79, 9904-10, 11792, 11803-805, 13468, 13525, 13554, 13567, 13574-575, 13593-596, 13617, 15211, 15245, 15256, 15278-279, 15281, 15283, 15294, 15315, 17078, 17101, 17112, 18863-865, 18885, 20480, 20485, 20487.
12017	travel authorization, report.....
Interagency training programs:	18892
1963-1964.....	Interior and Insular Affairs Committee, Senate:
13328	calendar.....
spring, 1963.....	3856
4625	committee prints.....
Inter-American Development Bank: capital stock, increase, report, print as House document, report.....	8116, 15391
17125	hearings.....
foreign operations appropriations, 1964, hearings.....	2095-96,
18918	4782-83, 6301, 8117-21, 10016-17, 12020-21, 13810-813, 15387-390, 7314, 19057-61, 20610-611
participation of United States—	investigations and studies, authorizing, report.....
increase, hearing.....	6249
15305	reports.....
15286	8042-45, 8060, 8063-72, 8074, 11984-986, 11995-997, 11999-12002, 13677, 13702, 13716, 13726, 13757, 13760, 15353-354, 15357, 17240, 17258-270, 17277, 17280, 19026-30, 19033, 19035-40, 20574-583.
report, July 1-Dec. 31, 1961.....	
9834	
report, Jan. 1-June 30, 1962.....	
17072	
report, July 1-Dec. 31, 1962.....	
17073	
Inter-American Highway: construction, authorize funds for completion, etc., hearing.....	
303	
economic development within and between countries of the Americas (address).....	
9774	
partnership of purpose (address).....	
9781	
Inter-American Institute of Agricultural Sciences, convention, protocol of amendment, ratification, report.....	
20532	
Inter-American Republics, <i>see</i> American Republics.	

# JANUARY-DECEMBER

	Entry
Interior Department:	
appropriations, 1963—	
proposal	7863
supplemental proposal	8022
appropriations, 1964—	
hearings	6184, 9995
law	15158
reports	7939, 119511, 13616
budget, 1964—	
amendment	9840
decrease	13459
decrease, proposal	4729
careers, directory for college students	623
decisions	3794, 14053
digest	20749
efficiency and economy in operation—	
hearing	2050
report	11794
film catalog	8368
Finance Division, appropriation ledgers, 1958-1923, index	16416
forest conservation, management responsibilities	8367
Library, list of accessions	3868
Missouri River Basin, progress	4112
patent practices, preliminary report	331
policies, programs, and activities, hearings	7999
press releases	4061
publications	12247
report, 1962	5047
saline water conversion program	624
saline water research development progress reports	624-625, 5050, 6577-78, 8369, 12246, 14057-61, 19348, 20752-753.
specialized positions, examination announcement, supplement	18736
Interior quality of eggs	7535
Interlaminar properties of 5 plastic laminates	12158
Intermetallic compounds, see Metals.	
Intermountain Forest and Range Experiment Station:	
annual report, 1962	10209
forest survey releases	569-570
misc. pub. series	10212
research notes	571-572, 6485-86, 10213-214, 4983, 6487, 10215, 17473
research papers	
Intermountain region:	
Forest Service, yearbook—	
1960	580
1961	568
Internal combustion engines, see Engines.	
Internal parasites of swine	5818
Internal revenue:	
act of 1962, comparative analysis of prior law and act of 1962—	309
act of 1963—	
hearings	20607
reports	17144, 17150
print additional copies, report	17142
code of Federal regulations—	2379, 4910-16, 6428-29, 6583, 8247, 8374
code of 1939, amend, report	4740
code of 1954, amend—	
description of interest equalization tax	15336
hearings	18962, 20607
laws	7823, 7828
reports	4741, 4744-45, 6280, 17144, 17150
print additional copies, report	17142
statement	21148
code of 1958, amend—	
law	20434
reports	11851, 17286

	Entry
Internal revenue—Continued	
decisions, weekly	4245
Federal system, facts and problems, 1961, committee print, additional copies, report	15365
internal revenue bulletin	3795
semiannual cumulative	10321-322, 20754
procedure and administration, IRS looseleaf regulations system—	2374-75, 10326, 19351
refunds and credits of taxes, reports	9837, 15184
tax legislation, digest	10322
see also Taxation—also names of certain taxes, e.g., income tax—also names of items taxed.	
Internal Revenue Service:	
administrative changes, hearing	8102
Alcohol and Tobacco Tax Division, laws enforced, guide for law enforcement officers	5051
and U.S. taxes, brief history	17552
careers in tax work	2370
circular	628
history, 1862-1962	6580
information guides—	10314-320, 12248
looseleaf regulations system—	
employment tax	12250, 15641
estate and gift tax	15640
excise taxes	629, 5055, 6582, 8372, 10326, 12251, 14064-66, 15642, 17551.
income tax—	627-628, 2372-73, 5052-54, 6581, 8371, 10323-324, 12249, 14062-63, 15637-639, 17550, 19349-350, 20755.
procedure and administration—	2374-75, 10326, 19351
national office, air travel authorized, GAO review	591
news releases	4062
office automation—	
impact	12809
manpower implications in changeover	18040
report, 1962—	
departmental edition	2371
document edition	2025
travel, entertainment, and gift expenses, 1962 rules for deducting, and new 1963 record-keeping rules for substantiation	6584
Internal Revenue Taxation Joint Committee, tax cases decided by Supreme Court	9951
Internal security, see National security.	
International agreements:	
conduct of Communist China—	18934
in force, list	5743
treaties and other international agreements, 1962	5745, 16613
see also subjects, names of countries, etc.	
International Association of Governmental Labor Officials, convention proceedings, 1962	10886
International Association of Industrial Accident Boards and Commissions, proceedings of annual convention, 1962	12778
International Atomic Energy Agency: role in development of nuclear power, U.S. viewpoint (remarks)	18609
safeguards to U.S.-Japan cooperation agreement, agreement—	21133
statute, amend, text	9434

Do not order from index; see indicated entry

Page 343

# INDEX 1963

	Entry
International Bank for Reconstruction and Development:	
capital stock, increase—	
hearing .....	15305
reports .....	17104, 20509
print as House document, report .....	17126
new bond issues in U.S. market .....	12120
participation of U.S.—	
report, July 1-Dec. 31, 1961 .....	9834
report, Jan. 1-June 30, 1962 .....	17072
report, July 1-Dec. 31, 1962 .....	17073
International boundary studies .....	20146-107
International broadcasting service, see Voice of America.	
International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America, emergency board report .....	391
International Bureau for Protection of Industrial Property:	
participation of U.S., increase ceiling of contribution—	
hearing .....	11808
law .....	15148
reports .....	13555, 13759
International Bureau of Education, statutes .....	13075
International Civil Aviation Organization:	
Convention on International Civil Aviation, amend protocol .....	11923
financing air navigation services in Greenland, etc., agreement .....	16591
protocol, agreement with other Governments .....	1539
International classification of diseases, adapted for indexing hospital records by disease and operations .....	3289-90
International coffee agreement, 1962:	
authorize procedures to carry out obligations, reports .....	20478, 20484
hearing, executive .....	8107
report, executive .....	18969
International Coffee Organization:	
establish—	
hearing .....	8107
report .....	18969
International commerce (periodical)—	
supplements .....	14069, 15653, 17563-565
business publications, checklist .....	2380, 8422
press releases .....	4064
International Commission for Supervision and Control in Laos, U.S. share cost of operations, report .....	13773
International Commission on Radiological Units and Measurements:	
recommendations—	
clinical dosimetry .....	16417
evaluating radiological equipment, etc .....	18186
radiobiological dosimetry .....	11095
International Conference on Public Education, 25th meeting, recommendations .....	303
International Convention for Prevention of Pollution of Sea by Oil:	
amendments, text .....	8025
ratification, report .....	20540
text .....	20517
International cooperation:	
and problems of transfer and adaptation .....	2442
social welfare and social development activities, contribution of Welfare Administration .....	20250
International Development Agency:	
administrator, nomination of David E. Bell, hearing .....	4776
AID-financed awards .....	3431

	Entry
International Development Agency—	
Continued	
and U.S. voluntary agencies, growing partnership .....	12259
contract operations—	
Research, Evaluation and Planning Assistance Staff, hearings .....	288
counterpart funds and foreign currency accounts .....	3569
field staff, Foreign Service list .....	1510, 3340
guaranties under foreign assistance act of 1961, opinion of Attorney General .....	19773
Investment Guaranties Division, report, quarterly—	
applications in process .....	4129
investment guaranties issued .....	4128
investment guaranties, specific risk, issued through June 1963, report .....	15656
loan authorizations, etc.—	
report, July 1-Dec. 31, 1961 .....	9834
report, Jan. 1-June 30, 1962 .....	17072
operations report .....	3996
participant training for development programs of cooperating countries .....	12262
principles of foreign economic assistance .....	19361
procurement information bulletin—	
projects, by country and field of activity, 1962 .....	3432
United States missions, housing, building, and planning, bibliography .....	10346
International Development Association:	
foreign operations appropriations, 1964, hearings .....	18918
participation of U.S.—	
report, July 1-Dec. 31, 1961 .....	9834
report, Jan. 1-June 30, 1962 .....	17072
report, July 1-Dec. 31, 1962 .....	17073
resources, increase, proposal, special report .....	20454
International exchanges:	
agreement with—	
Iraq .....	20179
Rumania .....	13085
American studies abroad, report .....	18374
educational and cultural exchange-of-persons program .....	14709
annual report, July 1, 1960-June 30, 1961 .....	1514
State Dept. program .....	18327
special report on American studies abroad, report .....	15186
special study of effectiveness, report .....	9836
exchange-of-persons program, a beacon of hope .....	18375
International Teacher Development Program, report, 1961-62 .....	20637
plans for visiting professionals from foreign countries .....	13022
International Federation of Christian Trade Unions, directory .....	15657
International Finance Corporation:	
participation of U.S.—	
report, July 1-Dec. 31, 1961 .....	9834
report, Jan. 1-June 30, 1962 .....	17072
report, July 1-Dec. 31, 1962 .....	17073
International flight information manual .....	9643
amendments .....	4427, 14927, 18327
International Geophysical Year, 1957-58:	
bibliography of Russian literature, 1960 .....	7296
daily aerological cross sections, pole to pole along meridian 75° W. .....	7506, 9492, 14778
low frequency power spectrum of cosmic-ray variations .....	9170

# JANUARY-DECEMBER

	Entry
International Geophysical year—Con- scientist's work in Antarctica.	
USSR study	20623
USSR atmospheric observations	12365
world weather maps	20244
International Ice Patrol	11678
International Indian Ocean Expedi- tion, International Meteorologi- cal Centre, agreement with India	11301
International labor (periodical)	15658
International Labor Affairs Bureau, operating programs, outline	17567
International Labor Conference, con- ventions, etc., adopted, text	20457, 20526
International Labor Organization: conference in Geneva— appoint House delegates to at- tend, report	11812
U.S. participation, hearings	20498
constitution, amendment, accept- ance by U.S.— hearing	9932
law	15144
reports	11949, 13557
constitution amendment agree- ment	20173
recommendations, and convention adopted at conference, text	20457, 20526
International Ladies' Garment Work- ers' Union, health center anni- versary medals, report	18848
International law: digest	14705
information for military lawyers	107
Soviet Union and right of self-de- termination	16175
see also Maritime law.	
International Law, Private, Hague Conference on, see Hague Con- ference in Private Interna- tional Law.	
International Meteorological Centre, establish at Bombay, agree- ment	11801
International Monetary and Financial Problems, National Advisory Council on, see National Ad- visory Council on Interna- tional Monetary and Financial Problems.	
International Monetary Fund: Bretton Woods agreements act, amend— hearing	15305
reports	17104, 20509
print as House document, report	17126
participation of U.S.— report, July 1-Dec. 31, 1961	9634
report, Jan. 1-June 30, 1962	17072
report, July 1-Dec. 31, 1962	17073
International notams, notice to air- men service	3708
International organization and con- ference series	3342, 6727, 7436, 9399, 11298, 13072, 14710-711, 18328.
International organizations: foreign operations appropriations, 1964, hearings	18918
general information	13072
legislation amend, hearing	11898
public, USSR handbook	6868
scientific, library, documentation, and information services guide	5464
staffing, report of Advisory Commit- tee on International Organiza- tions	20168
United States contributions, 1962	18801
United States missions, field staffs, Foreign Service list	1510, 3340

	Entry
International Patent Office Workshop on Information Retrieval, pro- ceedings	5666-67
International payments, see Finance.	
International politics, see Interna- tional relations.	
International postal service: agreement with Thailand	1519
international mail— directory	5671
changes	3806
general information	3255
International Red Cross: commemorative stamp, dedication (remarks)	21070
5-cent commemorative postage stamp (poster)	20022
International relations: advancing in fishing industry, USSR study	14127
Africa, U.S. operations report	5021
print as Senate document, re- ports	6273, 7918
Berlin in changing Europe, U.S. policies, report	4774
changing patterns in world affairs, interview with Secretary of State Dean Rusk	1511 4909
code of Federal regulations	9934
Congo policy of U.S., hearing	7129
DeGaulle-Adenauer pact	8806
DeGaulle's policies, Aleksander Ka- walkowski's article	8806
documents on aspects of exploration and use of outer space, 1954- 1962, staff report	9960
educational and cultural exchange program— annual report, July 1, 1960-June 30, 1961	1514 14709
opportunities	
educational materials, periodicals related to understanding, an- notated list	374, 10069
five goals of U.S. foreign policy	13233
Food for peace, use of America's abundance	8423
for commanders, this changing world	97, 1759-91, 4434-35, 5906-7, 7661- 62, 9646, 11528-529, 13232-233, 14934, 16819-820, 18535-537, 20318-319.
foreign affairs (excerpt)	7434
foreign affairs outlines (series)	7435, 9395
foreign policy briefs	3725
foreign policy of U.S.— American foreign policy, current documents, 1959	14702
and operations abroad, ambassa- dors role and problem of co- ordination, study	15385, 15967
print as Senate document, re- port	17288
five goals, security, progress, etc. in the Pacific	13067 20319
investigation, authorization, re- port	6106
State Department bulletin	3594
study, authorization, reports	2082, 6244
foreign relations of United States, price list	11224
foreign relations of U.S., diplo- matic papers— American Republics, 1941— departmental edition	1509
document edition	219
American Republics, 1942— departmental edition	11296
document edition	9815
Near East and Africa, 1942— departmental edition	13066
document edition	11735



# INDEX 1963

	Entry
International relations—Continued	
1943, general—	
departmental edition	20144
document edition	18794
foreign scientific policy coordina-	
tion, staff study	6202
general foreign policy series	1511,
7434, 9398, 11297, 13087,	20145
geodetic operations in U.S. and in	
other areas through interna-	
tional cooperation, 1960-62	13332
German foreign policy documents,	
3d Reich, 1st phase	3339
international information and cul-	
tural series	1514, 14709, 18327
legislation on foreign relations, col-	
lection	10011
military cold war education and	
speech review policies, hear-	
ings, index	2085
political behavior, list of current	
studies	21119
road ahead (address)	9402
Rumanian foreign policy of peace-	
ful coexistence, translation	17800
Soviet economic offensive in West-	
ern Europe, special study mis-	
sion, report	4749
State Department, 1963, report to	
the citizen	11297
two kinds of politics, domestic and	
international (address)	14710
United Nations in fight for free-	
dom (address)	9403
United States-Korean relations—	
chronology of important develop-	
ments, 1834-1962	1508
historical summary	1508
USSR—	
international economic relations,	
translations	20833
Soviet Armed Forces and inter-	
nationalism	15790
winning cold war, U.S. ideological	
offensive, hearings	7997, 11901
world economy and international re-	
lations, translations	10384
International Rice Commission, con-	
stitution	3353
International (Rome) Institute for	
Unification of Private Law:	
United States participation—	
hearing	18943
report	20481
International Rules of Judicial Pro-	
cedure Commission:	
appropriations, 1963, proposal	7863
report, 1962	7865
print as House document, report	7934
International science notes	11130
International science reports, Nation-	
al Science Foundation	3193, 16445
International Scientific Affairs Office,	
general information	18324
International scientific organizations,	
guide to their library, docu-	
mentation, and information	
services	5464
International Shoe Co., wage chron-	
ology, 1945-64	19785
International sugar agreement, 1953:	
report	20531
text	20511
International teacher development	
program:	
1960-61, annual report to Bureau	
of Educational and Cultural	
Affairs, Department of State	2157
report, 1961-62	20637
International trade, see Commerce.	
International Trade Fairs Office, press	
releases	4005
International Typographical Union,	
apprenticeship program etc.	
(remarks)	14931

	Entry
International upper mantle project,	
see Earth.	
International Whaling Commission,	
convention, amendments to	
schedule	9427
International wheat agreement, 1959,	
ratification, report	20530
International wheat agreement, 1962—	
internationally dangerous forest tree	
diseases	18437
Interparliamentary Group, Mexico-	
United States, see Mexico-	
United States Interparliamentary	
Group.	
Interns, see Physicians.	
Interparliamentary Union, U.S. par-	
ticipation, report 1962	6215
Interplanetary dust, see Cosmic dust.	
Interpolation:	
error propagation of formulas for	
2d-order differential equations	14568
procedure for calculating atmos-	
pheric band absorptions from	
laboratory data	12902
Interpretations, Federal Reserve Sys-	
tem Board of Governors	12121
Interpretative bulletins, Wage and	
Hour and Public Contracts	
Divisions	1591, 3396, 7504, 9486,
11378, 16648-649, 18364, 20230	
Interrelation of algae and microorga-	
nisms, USSR	8451
Interstate agreements:	
compact to conserve oil and gas,	
consent of Congress to ex-	
tend—	
hearings	13659, 19057
law	17045
reports	15357, 17100
Costilla Creek compact, amend-	
ment, report	18864
Northeastern Water and Related	
Land Resources Compact, con-	
sent of Congress, hearing	6304
Interstate and Foreign Commerce	
Committee, House:	
calendar	3838
committee print	18949
employees, authorize 2 additional,	
report	6150
hearings	294,
2053-54, 6198-99, 8001, 9939-40,	
11907-908, 13657-661, 15318-	
320, 17172-176, 18948, 18950-951	
Investigations and studies—	
authorization, report	6103
expenses, reports	6121, 18879
travel authorization, report	11817
reports	6117,
6180, 9894, 11811, 11820, 11839,	
13545, 13589-590, 13592, 13609,	
15232, 17110, 17113-114, 17131,	
17143, 18883, 20479.	
travel authorization, report	18858
Interstate and Foreign Commerce	
Committee, Senate:	
hearings	17307
reports	20541, 20543
Interstate carriers, see Carriers.	
Interstate commerce, see Commerce.	
Interstate commerce act, see Car-	
riers—Commerce—Motor car-	
riers—Motor vehicles.	
Interstate Commerce Commission:	
appropriations, 1964, hearings	18919
decisions—	
bound reports	636,
5104, 6632, 10356, 19366	
consolidated index digest—	
motor carrier operating	
rights	2447, 12264
rates and practices	2448, 6631
separates	3800-4



# JANUARY-DECEMBER

	Entry
Interstate Commerce Commission—	
Continued	
member nominations—	
Paul J. Tierney, hearings.....	6291
sundry nominations, hearings.....	2090
Timothy J. Murphy, report.....	20543
press releases.....	4006
railroad work rules, ICC approval,	
hearings..... 15381,	17175
regulations for interstate transportation of migrant workers.....	12269
report, 1962—	
departmental edition.....	2445
document edition.....	2026
rules of practice.....	5105
Interstate Commission on Potomac River Basin:	
appropriations, 1964—	
hearings.....	7981
law.....	20425
reports.....	9874, 15356
Interstate compacts, see Interstate agreements.	
Interstate Conference on Labor Statistics, proceedings of 20th conference.....	14481
Interstate system route log and finder list.....	11250
Interstate trucking, see Motortrucks in freight service.	
Interviewers, employment security, analysis of appointments.....	20745
Intestines:	
adaptation of transplants incorporated in urinary system, physiological and histochemical study.....	5235
flora, of ground squirrels, changes during periods of hibernation.....	11500
microflora, biocenosis, effect on development of radiation sickness, USSR study.....	2967
Intoxicants, see Liquors.	
Intra-coastal Waterway:	
Gulf, Louisiana and Texas, channel improvement, engineer report—	
departmental edition.....	418
document edition.....	266
Gulf, Palacios, Tex., channel improvement, engineer report—	
departmental edition.....	417
document edition.....	242
Gulf, transportation lines.....	20652
Introducing BLM.....	3042, 19808
Inventions:	
employed inventors, European law, study.....	6303
facts about National Inventors Council.....	7319
Government owned, available for license, patent abstract series—	
index.....	1959
supps.....	9782, 13350
products list circular.....	4111
space research contracts, ownership, report.....	2059
wanted by Armed Forces, etc., lists.....	1339, 9230
Inventories:	
automatic data processing equipment in Federal Government.....	20503
department store, price indexes.....	7170, 18042
livestock and poultry, 1963.....	5747
manufacturers' industry survey.....	3785
manufacturers, value, industry survey, 1961.....	4564
nursing homes and related facilities, 1961.....	20103
preliminary inventories series.....	1327-28, 3170, 7305-7, 9200, 12892, 14596-597, 18183.

	Entry
Inventories—Continued	
real property—	
leased to U.S. throughout world, 1962.....	8328
owned by U.S. throughout world, 1962.....	6543
Inventors, employed, European law, study.....	6303
Invertebrates:	
acclimatization, USSR translation.....	16133
benthic, of eastern Bering Sea, survey.....	8279
close-in effects of underground nuclear detonation.....	11576
ecological characteristics of bottom communities of Sea of Okhotsk, USSR study.....	5403
marking.....	10195
Inverters:	
three-phase static, with waveform synthesis.....	18235
tunnel diode static inverter, adaptation to higher input voltages.....	1372
Investigators, wage-hour, career opportunities.....	20226
Investment companies:	
act of 1940, releases, SEC.....	3806
small business—	
act of 1958, amend, hearings.....	13644
conflict of interest problems, hearing.....	19045
investment act, text, addenda.....	12030
licensed by Small Business Administration.....	11278, 20129
operations, report.....	9977
Investment Division, Small Business Administration, reporter.....	4144
Investment Guaranties Division, see International Development Agency.	
Investments:	
aids to business overseas.....	8424
basis for international profit (remarks).....	6053
capital—	
assets, recent changes in liquidity.....	13937
irrigation construction, economic effectiveness, USSR study.....	8879
District of Columbia, legal investments for trust funds, list.....	4800, 15410
factors in India.....	6590
foreign bonds, new issues in U.S. market.....	12120
guaranties—	
agreements with—	
Colombia.....	3358
Congo (Brassaville).....	1551
Congo (Leopoldville).....	11325
Cyprus.....	10586
Ecuador.....	21130
Gabon.....	14713
Greece.....	13089
Guatemala.....	1527
Israel.....	13078
Ivory Coast.....	7448
Jamaica.....	9422
Jordan.....	20171
Malagasy Republic.....	20176
Nepal.....	16611
Niger.....	1535
Nigeria.....	5742
Trinidad and Tobago.....	9428
Tunisia.....	13088
United Arab Republic.....	14005
Venezuela.....	13086
Vietnam.....	20187
by AID under foreign assistance act, opinion of Attorney General.....	19773
countries where available.....	2436, 15655

	Entry		Entry
<b>Investments—Continued</b>		<b>Ion thrusters—Continued</b>	
Hong Kong.....	5061	electron-bombardment—	
India, increase in U.S. trade and investment opportunities.....	5088	neutraliser tests on flight-model.....	16368
individuals, in savings accounts, etc.....	3807, 12108	screen and accelerator grids.....	16363
international, balance of payments of U.S., 1870-1961, statistical supplement.....	4550	optics, numerical evaluation.....	11042
investment advisers act releasea, SEC.....	3805	Ionium, see Thorium isotopes.	
Iran.....	6597	<b>Ionization:</b>	
law.....		air, and aerosols interaction, dose-effect relationships.....	7197
Federal Republic of Cameroun.....	5074	air, Soviet equipment, development and production information.....	12636
Islamic Republic of Mauritania.....	5069	C-stellarator discharges, variation of neutral density with time.....	14088
Malagasy Republic.....	6616	effect in hypervelocity impact.....	18165
Niger.....	18648	gase, use as quantitative analyzer for Bi-gaseous mixtures.....	8155
Republic of Congo (Brazzaville).....	5062	method, modification, for continuously recording contact potential differences.....	18248
Republic of Dahomey.....	17554	Mo-W alloy components, USSR study.....	19708
Republic of Gabon.....	5065	photoionization coefficients of propylene and butene-1 in vacuum ultraviolet.....	19898
Republic of Senegal.....	5073	potentials for molecules found in high-temperature chemical reactions, tabulated values.....	12874
Upper Volta.....	15849	<b>Ionization chambers:</b>	
Nicaragua.....	2395	vacuum ultraviolet—	
nonfarm mortgages, life insurance companies, 1962.....	15485	ion chambers, characteristics and applications.....	16366
PACAF basic bibliographies.....	5880	photolionization detector.....	7288
private U.S., improve flow to Latin America, report.....	9783	<b>Ionizing radiation:</b>	
small business investment act amendments of 1962, hearings.....	13644	and radionuclides in ornithology, selected bibliography.....	7716
small business investment act of 1958, amend, hearings.....	12007	average diameter of erythrocytes during chronic action of small doses, USSR study.....	10639
Thailand, factors, 1962.....	2425	biological action, USSR studies.....	16009
<b>Investors, protection in securities markets, special study reports.....</b>	11763-754, 18798-799	biological effects of gamma-radiation, USSR study.....	19472
<b>Iuyan Kara Mountain quadrangle, Wyo., geology.....</b>	8331	certain problems of effect on nervous system, USSR.....	12374
<b>Inyo County, Calif., geology and ore deposits, Darwin quadrangle.....</b>	2347	changes in anterior lobe of hypophysis during irradiation and cooling, USSR study.....	15671
<b>Inshenerno Naichevsky shurnal (periodical):</b>		chemical protection of mammals, USSR study.....	10619
translations.....	10747, 14108, 15968	control on atomic ships.....	2530
<b>Inshenernyy shurnal (periodical):</b>		cosmic flights, USSR study.....	19440
translations.....	14214	Croatian industry, Yugoslavian study.....	12635
<b>Iodides, loss, importance of stomach and other extrathyroidal extrarenal avenues during thyroid uptake tests.....</b>	16780	economic feasibility of pasteurising fresh strawberries, peaches, tomatoes, grapes, oranges, and grapefruit.....	10090
see also Cesium iodide.		<b>effects on—</b>	
<b>Iodine:</b>		higher nervous system function of progeny.....	14957
high polymer compounds, germicidal and therapeutic properties, USSR study.....	785	lipids of fish—	
metabolism, in deer.....	18562	annual report.....	18595
minerals yearbook chapter.....	18077	final summary.....	18598
<b>Ion chambers, see Ionization chambers.</b>		nervous system, USSR study.....	18591
<b>Ion exchange:</b>		virus infections and antiviral immunity.....	9669
beryllium determination in urine by ion exchange separation and fluorimetric measurement.....	14984	energy metabolism in restoration of irradiated cells, USSR study.....	20911
cesium-137, use in determination of cation exchange capacity.....	599	higher nervous functions in animals antenatally irradiated, USSR study.....	17673
determination of cobalt and nickel in tungsten.....	20965	inactivation of encysting <i>Aerobacter</i> cells.....	16793
inorganic exchange materials use for radioactive waste treatment, meeting.....	7709	ionizing and X-ray irradiation, USSR studies.....	16055
materials, use in demineralization of saline water.....	14060	irritating effect, USSR study.....	14208
mineral materials (series).....	506, 5017	low doses, effect on reactions of body, USSR study.....	10864
rare-earth separation, ion exchange with EDTA and DCTA, hydrogen as retaining ion.....	3089	microbiological response to varying types and methods of application.....	7416
separation of impurities in rare-earth metals.....	1237	possible cause of carcinogenesis, USSR study.....	10832
<b>Ion exchange resins, see Resins.</b>		primary processes of radiation injury, USSR study.....	12453
<b>Ion rocket engines, see Rockets.</b>			
<b>Ion thrusters:</b>			
analysis, theory and application of numerical solution of axially symmetric Poisson equation.....	12859		
cesium-coated electrodes, thermionic emission.....	19816		

# JANUARY-DECEMBER

Entry  
1368  
1363  
1042

17197

1636

988  
165

155

248

708

898

874

368  
288

716

339  
909

72

74

71

19  
30  
40

35

90

57

95  
98  
51

39

11

73

93

98

4

6

2

3

ionizing radiation—Continued	
protection against, prophylaxis and	
therapy	4412
protective measures when working	
with radioactive isotopes, USSR	17671
significance of plasma cells in antibody formation process during	7073
use of ACTH and adrenal cortical hormones on individuals exposed to radiation effects, USSR study	10767
X-irradiation, cytochemistry of blood glycogen in mammals, USSR study	8838
Ionosphere:	
antenna radiating within, ion sheath effects	11049
CRPL predictions based on numerical methods of mapping, handbook	8172
E region, reaction rate equations, computer technique for solving	1737
80-400 km atmospheric region wind flow, measurement techniques	9151
electron and ion temperatures	18122
electron density of wave motions caused by nuclear detonations	18198
electron temperatures	19892
excitation of electroacoustic waves, F-region, electron density distribution data	9181
F2 layer disturbance in high latitude, estimation, USSR study	6908
first topside soundings	7232
impedance of electrically short antennas	5581
ionospheric F <sub>2</sub> layer's maximum usable frequency, monthly forecasts, USSR study	12335
lower, effect of auroral bremsstrahlung	21006
quiet—	
model	5605
mean electron density variations	11098-99
satellite observations at magnetic equator	12869
topside, investigations	20984
winds, motions into night and sporadic E correlations	18167
Ions:	
behavior in aqueous solutions, theoretical studies of osmotic cells	14061
common to natural water, effect on rotation of limestone	9121
ion-atom collisions, lectures	7313
sheath effects near antennas radiating within ionosphere	11049
source, generates ions through impact ionization of gas molecules	14923
temperature in ionosphere	18122
see also ions by name, e.g. Helium ions	
Iota, Explorer, see Satellites	
Iowa:	
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics	4567
climatological data	3517
county business patterns, activities covered by OASDI program	15050
errata	18673
electric rate book	10196
jurisdiction over Ordnance Plant Reservation at Burlington—	
hearings	18921, 18924
report	18843
limestone quarries, vibrations from delayed blasting	16340

Entry

Iowa—Continued	
mineral industry, minerals year-book chapter	20957
population, 1960, characteristics	15043
precipitation data, hourly	3771
public school finance program, 1963-63	12075
urban areas along Mississippi River, flood control, engineer report—	
departmental edition	437
document edition	226
weather stations, decadal census	16670
women workers, 1960	5774
ZIP code directory	20039
Iowa Ordnance Plant Reservation: legislative jurisdiction, retrocede to Iowa—	
hearings	18921, 18924
report	18843
Iquitos, Peru, uranium reconnaissance in area	14999
Iran:	
Afghanistan boundary, study	20151
agricultural commodities, agreement	11319
economic developments, 1962	8359
education	8163
gas appliances, household and commercial, U.S. market	18616
investments in	6597
United States foreign aid program, report of study	19055
Iraq:	
agricultural commodities, agreement	20155
cultural relations, agreement	20179
educational data	6328
gas appliances, household and commercial, U.S. market	18617
labor law and practice	9046
students, internal troubles, report	5368
Ireland:	
educational data	8167
import tariff system	6589
sailing directions	9254
Irian, West, general information	8717
Irkutsk, Russian SFSR, general information	8835
Iron:	
absorption during alterations in environmental temperature	18484
alloys—	
aluminum, magnetic, and associated systems, review	12958
hydrogen effect on stress-rupture and fatigue properties, preliminary investigation	1287
basic iron and steel, industry wage survey	5450
blast furnace—	
after quenching with nitrogen, examination	10651
thermochemical model	10965
catalyst, Fischer-Tropsch oil-circulation process experiments	9124
catalysts, carbides, nitrides, and carbonitrides in Fischer-Tropsch synthesis	19824
characteristics in lime soda sinter process for recovering alumina from anorthosite	1230
deposits—	
Ceballos Creek titaniferous	14508
Cuyuna North range, Minn.	20734
Precambrian, near Atlantic City, Wyo	10285
dermal excretion, relation to balance, etc.	1813
electrolytic, purification	18251
foundries, current industrial reports	3574, 16897
high purity, analysis with electrochemical cell	7219

# INDEX 1963

	Entry
Iron—Continued	
industry, outlook for 1963 and review of 1962	4523
influence of microstructural inclusions on friction and wear	11046
iron and steel, mineral industry survey—	
annual	16826
monthly	3808
iron and steel scrap, monthly—	
final data	3809
preliminary data	3810
manganese concretions, bacteriogenic formations, Indian Ocean, USSR study	15799
metallic binders	16334
minerals yearbook chapter	19840
open-pit mining, milling and costs, Groveland Mine, Mich	14501
ores—	
notation processes at Ta-Ku Shan plant, Communist China study	8990
Kerch' peninsula, USSR	12516
Lake Superior	1243
mineral industry survey, monthly	3811
production, etc. 1962	16327
preliminary	3058
mine workers, Tariff Commission report	14741
minerals yearbook chapter	19842
polished plates and sheets, duty law	17016
reports	13564, 15349
pre-reduced pellets, new blast furnace raw material	3104
reconnaissance of resources in New Mexico	20948
scrap, minerals yearbook chapter—	19841
see also Cast iron.	
iron castings, see Castings.	
iron curtain area, see Soviet bloc.	
iron ores, see Iron.	
iron oxides, pigments, minerals yearbook chapter	18078
iron pentacarbonyl, thermodynamic properties at high temperatures	5482
IRRA, see Industrial Relations Research Association.	
irradiation, see Gamma rays—Ionizing radiation—Neutrons—Radiation—Ultraviolet rays—X-rays.	
irradiation illness, see Radiation illness.	
irrigation:	
agricultural lands, U.S., census of agriculture, 1959	170
construction, economic effectiveness of capital investment in, USSR study	8879
enterprises in northeastern Colorado, organization, etc.	15416
Frenchman Creek basin	15615
publications, price list	3263, 18277
role in community economic structure, Grand Valley, Colo., trade area	13035
systems, ditchbank weeds control—	40
Transvolga area, development	2470
utilizing radioactive sewage water on fields, USSR study	17813
water on farm, distribution, control, etc.	13178
water requirements	46
winter wheat in western Kansas, water management, consumptive use and nitrogen fertilization	16759
see also Canals—Reclamation of land.	
irrigation districts, see names of districts.	

	Entry
irrigation projects, see Reclamation of land—also names of projects.	
IRS, see Internal Revenue Service.	
Irtys' River, reference and guide book, USSR study	5225
Irving, Donald K., technologic trends in mineral industries (metals and nonmetals except fuels)	1257
IS series, Veterans Administration	11373
is this a computer?	6761
Isaacson, Peter A., modification of Chesapeake Bay commercial crab pot	13957
Iseri, Yukio, relief	11933
Ishmael, David, Mrs., relief	7883
Islamic Republic of Mauritania, see Mauritania.	
Island lantern (periodical)	3812
Isle Royale National Park, addition of donated lands, report	9867
Islar, D.A., spray distribution patterns from Stearman airplane flying at 50 feet	14835
Izleta paintings:	
departmental edition	93
document edition	220
isolation, purification and certain properties of type B C1. botulinum proteinase, USSR	5109
Isostasy, isostatic deformation of Lake Bonneville	20736
isothermal sintering of metallic powders under pressure, USSR	8604
isotopes:	
AEC policy objectives and Government organization (remarks)	1847
analysis of natural radioelements	5921
isotopes and radiation technology, review of recent developments	20332
myelographical uses in neurosurgery, USSR study	16112
power, use on earth and in space—radioactive—	20336
accumulation in body and their excretion	4469
application in metallurgy, Yugoslavia	17747
crystallization of aluminum during continuous casting, USSR study	12462
distribution	1821
in marine biology, USSR study	17737
protection of users from ionizing radiations, USSR regulations	17671
removing from organisms, USSR study	10476
use for tagging stinkbug, USSR study	17929
use in fishing industry, USSR study	19411
use in study of problems of flea ecology, USSR study	17806
radioisotopes—	
contamination of man, post-mortem discovery, USSR study	17930
in world industry, abstracts of selected foreign literature	134
in Yugoslavia	10545
sources, AEC licensing guide—	14952
their varied uses (remarks)	1846
uptake by some aquatic insects, USSR study	12513
usage, biomedical revolution (remarks)	1845
use in control of insect pests of plants and animals	16059
utilization for saline water conversion	12246
separation, application of distillation techniques to radiochemical separations	16849



# JANUARY-DECEMBER

	Entry
Isotopes—Continued	
technology development program, 4th annual contractors meeting, 1962	4480
see also names of isotopes, e.g. Strontium.	
Israel:	
agricultural commodities, agreements	1515
1531, 1548, 5733, 11315,	14725
Abdut 'Avohad Convention, Sept. 1962, speeches, etc.	2606
aviation and astronautics conference, translations	12398
Communist Party, policy statements	794
Communist press comments on anti-Arab riots, labor contracts, and nuclear weapons	825
economic and sociological information	2880
economy, basic data	10339
exports, preliminary appraisal, translation	10515
fact sheet	18329
immigration problems, translations	6991
immigration, settlement and Arab minority	5354
investment guarantees, agreement	13078
military information translations	2988, 5366
protocol for accession to GATT, agreement	11300
scientific and technical information, translations	748, 1150, 2776
scientific and technical personalities, biographic information	20899
settlement and professional training information	6825
sociological information	1110, 5380, 6754
telecommunication, facilities at embassy sites, etc., agreement	16589
United States foreign aid program, report of study	19055
Isle:	
free importation, continue—	
law	17020
reports	13551, 15351
Itabira district, Brazil, geology and ore deposits	15609
Italian Communist Youth Federation, right, center, and left factions	2953
Italy:	
agricultural commodities, child feeding program, continuation, agreement	1532
Communist Party—	
member expelled for doctrinaire and extremist views	2827
socialist position on relations with right and left	3009
10th Congress, Panjetta's reply to Chinese	2742
Togliatti's report to 10th Congress	1128
views on peace, etc.	2946
Communist press articles on Sino-Soviet dispute	16260
current political situation	10436
economic developments, 1962	8397
experimental communications satellites, intercontinental testing, agreement	3359
France boundary, study	20149
gas appliances, household and commercial, U.S. market	7785
industry and opportunity in Italy, report of 1962 U.S. Industrial Automation Mission	5060
outer space cooperation, agreement	1541
Pravda attacks Italian Socialist leader Nenni for anti-Communist policy	876
Reno Serri's report to Communist Youth Congress	2752

	Entry
Italy—Continued	
social bases of political parties	12435
Switzerland boundary, study	20157
trade agreement, exports of cotton velvetene fabrics	1554
Itawamba County, Miss., forest inventory statistics	3379
Item analysis, airmen, prediction of success from responses to Kelley activity preference report	64
Item identification, see Identification.	
It's smart to protect your sight	11240
Iversen, Robert T. B., food of albacore Tuna in Pacific	2288
Ivory Coast:	
economy, basic data	6608
gas appliances, household and commercial, U.S. market	18618
import tariff system	2393
investment guarantees, agreement	7448
Ivy, see Poison Ivy.	
Iwo Jima Memorial, care and maintenance on Mount Suribachi, Volcano Islands, report	17145
Izmirlan, Elizabeth K., relief	15189, 18771, 18977
Izvestiya Akademii Nauk SSSR (periodical):	
translations	6680

## J

J. Percy Priest Reservoir:	
engineer report—	
departmental edition	422
document edition	312
Jaanimets, Viktor, relief	17237
Jacchia, Luigi G., accurate drag determinations for 8 artificial satellites	18310
Jack, John R.:	
nonuniform flows, effects on performance of electrothermal thrusters	12866
optimizing nozzle performance for nuclear rockets	9154
Jack pine, see Pine.	
Jackendoff, Nathaniel, study of industry financial and operating ratios	1471
Jacks, GEM Jack Conex mover, cost, etc.	20208
Jackson, Andrew, 1-cent regular postage stamp (poster)	7386, 11202
Jackson, Charlie M., Jr., effects of peak deceleration on range sensitivity for modulated-lift reentry at supercircular speeds	18154
Jackson, J. E., first topside soundings of ionosphere	7252
Jackson, R. A., stability of south Jetty, sluslaw River, Oreg.	15458
Jackson, Willard L., grading defects in ponderosa and sugar pine logs	15553
Jackson, Miss.:	
Hawkins Field, weather observations, hourly, decennial census	14789
occupational wage survey—	
departmental edition	10905
document edition	9826
Jackson Mountains, Humboldt County, Nev., geology	12225
Jacksonville, Fla.:	
occupational wage survey—	
departmental edition	10902
document edition	9823
Jacobe, Juan C., and family, relief	17200



# INDEX 1963

	Entry
Jacobs, Conrad J., typewriters, current industrial reports.....	5997
Jacobs, James M.: power reactor demonstration program, literature search.....	15003
reactor hot channel factor and burnout.....	5944
Jacobs, Martin, establishing business in Ethiopia.....	5081
Jacobsen, P. S., screw-type classifier-cyclone combination performance.....	1247
Jacobson, Paul, farming terraced land.....	5822
Jaffe, Leonard, address, July 1953.....	18115
JAG Journal.....	3813
Jaggi, R. K., theoretical model for sunspot coolness.....	19021
Jaksic, Mirko, relief.....	11788, 17004, 17227
Jamaica: agricultural production, indices.....	2135
aviation, scheduled services, agreement.....	9410
defense, furnishing of articles and services, agreement.....	14733
investment guarantees, agreement.....	9422
newly independent nation, general information.....	13071
trade in cotton textiles, agreement.....	21136
Jamaica, N.Y., aircraft accident.....	20368
Jamaica Bay, aircraft accident.....	4602
James, George A., instructions for using traffic counters to estimate recreation visits and use.....	12193
James, William L., electric moisture meters for wood.....	19253
James River: channel improvement, engineer report— departmental edition.....	2204
document edition.....	2008
Jamison, D. K., inorganic exchange materials use for radioactive waste treatment, meeting.....	7709
Jamison, V. C., sealing farm ponds in Ozark highlands, etc.....	14833
JAN [judgment analysis] technique for analyzing group judgment.....	9622
Janavaras, Mark J., relief.....	11942, 15212
Janes, Alice H., helping families manage their finances.....	13168
Janis, Francis, and certain other Indians, relief.....	7892
Janitors, engineered performance standards handbook.....	1608
Janos, Joseph J., effect of lift on separation distance and loads for aborting vehicle, etc., of lunar mission.....	11055
Japan: agricultural commodities, agreement.....	16593
atomic energy, safeguards by IAEA, agreement.....	21133
aviation certificates of airworthiness, agreement.....	11300
communications satellites, intercontinental testing, agreement.....	3360
Communist developments, translations.....	6817, 8614
Communist Party anti-party elements, crisis in structural reform theory and plots.....	14189
National Activist Conference, Secretary-General Miyamoto's concluding remarks.....	5152
opinion on Rostow theory.....	10514
resolution of 4th Central Committee plenum.....	682

	Entry
Japan—Continued doing business in Japan, report of 1962 U.S. Machinery Trade Mission.....	5058
double taxation, convention, protocol.....	20525
economic developments, 1962.....	8406
education, financing exchange programs, agreement.....	20190
exports and imports, licensing and exchange controls.....	2388
food consumption, etc., compared with India and U.S.....	2134
grant of vessels, agreement.....	1521
health information for travel.....	16496
Japanese military administration in Indonesia.....	19661
Korea trade in 1st half of 1962, economic report.....	10452
labor conditions.....	18048
living conditions.....	10341
military assistance program, payment by U.S. of costs properly chargeable to Japan, GAO report.....	14012
Ministry of Education, Research Section, survey and research work.....	10079
mutual cooperation and security treaty— report.....	20542
text.....	20519
mutual defense assistance agreement, cash contribution.....	3344, 18334
North Pacific fisheries convention, amendments.....	16607
outdoor recreation survey— photographic products industry, development, 1961.....	145
rocks, relationship of volcanic rocks of Guam.....	15611
sailing directions, change.....	3207
settlement of postwar economic assistance, agreement.....	1823, 11316
shellfish, sanitary practices in processing for shipment, agreement.....	3355
Socialism Reform Movement Preparatory Council comments on peace movement, nuclear tests, etc.....	1058
Socialist committee protest to U.S. on Cuban crisis.....	2688
Socialist Party Congress, Swiss comment.....	2768
sounding rockets, development.....	7294
surface-to-air missile battalions for air defense, agreement.....	21121
trade— agreement.....	2035
cotton textiles, arrangement between U.S. and Japan.....	20177
export of zipper chain, understandings, agreement.....	21126
foreign trade, 1960-61.....	8387
protocol to GATT, agreement.....	18330
supplementary concessions to GATT, agreement.....	18337
United States compensatory concessions under GATT, agreement.....	11303
United States trade, 1959-61.....	2400
U.S. military installations, manpower utilization, GAO review.....	6535
Japan, Sea of, Soviet waters, fouling, study.....	15670
Japanese beetles, see Beetles.	
Japanese flowering cherry, blossoms, general information.....	7828
Japanese in United States, social and economic statistics, census of population, 1960.....	18702

# JANUARY-DECEMBER

	Entry
Jaquet, Byron M.:	
Scout research vehicle, effects of simulated bending and 4th-stage size on local pressures and normal-force distributions at Mach number 3.10	12873
static longitudinal and lateral stability characteristics at Mach number 3.11 of square and circular plan-form reentry vehicles	3115
Jarvis, N. L., surface viscosity of monomolecular films on water at low film pressures	12940
Java, sailing directions	3206
JCS pub. series	12270, 17571
Jeffers, Warren A., relief	18821
Jefferson, Thomas, Memorial, see Thomas Jefferson Memorial.	
Jefferson County, Colo.:	
geology of Kasaler quadrangle, Jefferson and Douglas Counties, Colo. (series)	10290, 14025
Malachite mine area, geological, geophysical, and geochemical prospecting methods, comparison	17521
Jefferson County, Mont., geology of Basin quadrangle	20729
Jefferson County, Pa., coal, carbonizing properties	16333
Jefferson National Expansion Memorial, general information	7334
Jefferson's manual, text	6089, 9953
Jelly, definitions and standards	4975
Jeneid, M. E., preparing shipments to Tunisia	8418
Jenkins, Howard, Jr.:	
address, Nov. 8, 1963	21038
nomination, hearing	17528
Jenkins, Reed B., Nike Apache performance handbook	9174
Jen-min jih-pao (periodical): translations	9014, 12339, 15828, 16119, 17686, 17785, 17957
Jennings, A. H., maximum recorded U.S. point rainfall, etc.	14802
Jensen, Albert C.:	
line-trawl fishery for cod and haddock at Chatham, Mass.	17450
stockfish and spiny lobster fisheries of South Africa	8271
Jensen, Chester E., least squares fit of an algebraically unspecified form	6506
Jensen, Eugene T.:	
cooperative program for certification to interstate shellfish shippers, sanitation of harvesting and processing of shellfish	1408
sanitation of shellfish growing areas	3277
Jernell, Lloyd S.:	
aerodynamic loading of model of Scout vehicle	14550
static stability characteristics of Blue Scout and Blue Scout, Jr., research vehicles	14581
Jersey cattle, see Cattle.	
Jersey City, N.J.:	
occupational wage survey—departmental edition	12793
document edition	11737
Jessup, William C., relief	7896
Jet airplanes, see Airplanes.	
Jet engines, see Engines (aircraft).	
Jet fuels, see Fuel.	
Jeter, Helen R., children problems and services in child welfare programs	13311

	Entry
Jets:	
annular configuration in ground proximity low-speed wind-tunnel investigation	9186
cold air, issuing perpendicularly from plate and normal to low-speed free-stream flow, surface pressure distributions induced on flat plate	7276
forward-facing, effect on bow shock of blunt body in Mach no. 6 free stream	7264
impinging uniform jets, theoretical and experimental studies	14753
jet flaps, ventilated clinging flow phenomena, investigation	20206
liquid, rate of breakup by transverse shock wave	11048
rectangular sonic, exhausting perpendicularly from flat plate, aerodynamic interaction effects	11069
rocket, exhausting upstream and downstream, pressure distribution induced on flat plate	1300
sonic or supersonic, exhausting normal to surface, loads induced on flat plate at Mach number of 4.5	14582
supersonic, tests of missile stabilizers	5660
Jetties:	
engineering and design manual	13878
Stuslaw River, stability, hydraulic model investigation	15458
Jeung Sing, see Sing, Jeung.	
Jewel bearings, United States trade, 1961	5984
Jewett, Douglas M., tensile strength of paper, electrical strain gage for testing	12169
Jewish War Veterans of United States, incorporate, report	17244
Jews:	
sacred scriptures, Soviet critique	5424
Soviet anti-semitism, discussion by 2 Norwegian Communists	10880
Jin, Pong Yong, see Pong Yong Jin.	
Jindra, Fred, lateral stability of trailer trains	21143
Job analysis:	
effects on judgment of variations in job rating scale format	7626
evaluation, application of policy-capturing model for analyzing individual and group judgment	16787
incumbents, efficiency of open-ended inventory in eliciting task statements	18493
job descriptions—	
ARNG technician program, NGB pamphlet	5621
publications, price list	14653
officer jobs—	
evaluation factors, Air Force, study	18494
evaluation in terms of merited pay versus merited grade	16785
feasibility of identifying predictors of success from personnel records, etc.	4402
rankings, prediction from ratings on 2 sets of job evaluation factors	16786
position and pay management, supervisor development program, basic course	5909
position classifiers manual	12241
Job description, see Job analysis.	
Job evaluation, see Job analysis.	
Job guide for young workers	4835

# INDEX 1963

	Entry	Entry
Jobs, <i>see</i> Civil service—Employment—Job analysis—Occupations—Training—Women.		
Johler, J. Ralph, on plasma collision frequencies proportional to energy in radio wave reflection and transmission process	9211	
John, James E. A., power transistor cooling in space environment	16374	
John Day lock and dam project, fish and wildlife resources affected	8275	
John Day Waterfowl Management Area, proposed, land acquisition justification	8277	
John H. Kerr Reservoir, archeological excavations in basin, figures	11522	
John Redmond Dam and Reservoir, spillway, hydraulic model investigation	2227	
Johns, Slaton L., YHU-1B category II performance tests	5856	
Johnson, A. L., field method for measurement of infiltration	6564	
Johnson, Andrew, papers, index	5466	
Johnson, C., ceramic-metal seals for high-power tubes	18498	
Johnson, Charles B., real-gas effects on hypersonic nozzle contours with method of calculation	9160	
Johnson, Dale E., irradiation behavior of BeO-UO <sub>2</sub> fuel as function of fuel-particle size	14970	
Johnson, David P., testimony, print additional copies, report	11858	
Johnson, George H., San Manuel Mine, Pinal County, Ariz., surface subsidence measurements	9131	
Johnson, George V., insects and related pests of house plants, how to control them	14858	
Johnson, Harold E., relief	7910, 13396	
Johnson, Howard B., truck-rail and sea-land shipping tests with Texas fruits and vegetables	5832	
Johnson, Hugh A.: exurban development in selected areas of Appalachian Mountains	12049	
tourism in small family farm areas	2141	
Johnson, J. Burlin, cratering, effects of mechanical properties of material	7223	
Johnson, J. E., nuclear submarine atmospheres, analysis and removal of organic contaminants	11162	
Johnson, Jesse C., remarks, Feb. 8, 1963	4501	
Johnson, Joseph L., jr., flexible-wing manned test vehicle	18152	
Johnson, Louis F., jr.: effect of decreased barometric pressure on— maximum pressure-volume relationships of human respiratory system	16808	
oxygen consumption	4411	
physical transducers for sensing oxygen	18499	
Johnson, Lyndon B., remarks, May 18, 1963	12972	
Johnson, Paul G., perigee propulsion for orbital launch of nuclear rockets	1325	
Johnson, Robert C., water-swelling synthetic fluoroalkanes and fluoromontmorillonoids	19856	
Johnson, Robert E., jr., review of mineral-fuel industries	1285	
Johnson, Robert F., geology and ore deposits of Cachoeira do Campo, Dom Basco, and Orno Branco quadrangles, Minas Gerais, Brazil	602	
Johnson, Ronald E., prices received by farmers for sheep and lambs	5844	
Johnson, Victor J., properties of solids at low temperature	11515	
Johnson, Walter, American studies abroad	18374	
Johnson, Vt., Eastern Magnesia Talc Co., mining and milling methods and costs	3057	
Johnson City, Tenn., area, geology and ground water resources	5025	
Johnson County, Ky., geology and coal resources	10274	
Johnson Mine, mining and milling methods and costs	3057	
Johnston, Denis F.: special labor force report, educational attainment of workers, Mar. 1962	16295	
uptrend in workers' education	20938	
Johnston, Kenneth H., three water-flooding projects and pressure-maintenance project in Butler and Cowley Counties, Kans., 1963	12829	
Johnston, Patrick J., longitudinal aerodynamic characteristics of 5th-stage Scout reentry vehicles, etc., at hypersonic speeds	11033	
Johnston, Paul M., geology and ground-water resources of Fairfax Quadrangle, Va.	609	
Joint Chiefs of Staff: 4 year term of appointment, establish— hearings	20495	
report	20491	
JCS pub. series	12270, 17571	
organization, etc., brief	8135-36	
Joint committees, <i>see</i> names of committees.		
Joint Conference on Children and Youth, report	4596	
Joint financial management improvement program, annual report for fiscal year 1962	586	
Joint Institute for Nuclear Research, proceedings of working conference on slow neutron physics, 1961	18563	
Joint Publications Research Service: JPRS series	644-1153, 2454-3009, 5108-5425, 6638-7132, 8437-9020, 10362-881, 12271-770, 14083-431, 15664-16264, 17573-18012, 19373-771, 20760-922.	
serial reports, publication notice	19772	
Joints: bolted, performance in Douglas fir	15577	
concrete, large blocks, tests	17414	
construction— horizontal, in concrete, methods of preparing	17414	
large blocks, tests	17414	
welded, of 1Kh18N9T steel, influence of heat treatment on corrosion resistance, USSR study	5241	
Jonathan, Neville, dark side airglow of Venus	19894	
Jones, D. C., interplanetary lunar and near planet environments	4392	
Jones, E. Walton, marketing farmers' stock peanuts in Virginia and North Carolina area	9579, 13174	

	Entry
Jones, Earle P., jr., test of direct seeding depths for slash and longleaf pine.....	12185
Jones, George W., jr., buffet pressures on models of large manned launch vehicle configurations.....	12851
Jones, J. B., test your understanding of directors' responsibilities.....	2239
Jones, John P.: analysis of benefits under 26 selected private pension plans.....	14697
remarriage tables based on experience under OASDI and US employees compensation systems.....	14696
Jones, John W., visually handicapped child at home and school.....	19121
Jones, Lawrence, address, Dec. 6, 1962.....	3049
Jones, LeRoy, effect of various pre-germination treatments on germination of black cherry seed.....	17498
Jones, Mildred V., supplement for 1962 wool statistics and related data through 1957.....	5842
Jones, Ruben L., transition matrix assumptions in circumlunar navigation theory.....	20980
Jones, W. L., capstan for deep-sea hoists.....	16462
Jones, W. Webster, cottage cheese and frozen desserts, cost of production in diversified milk plants in Kansas, Missouri, and Oklahoma.....	14872
Jones act, see Merchant marine.	
Jordan, Charles B.: corrosion inhibitor.....	21064
development of all-weather brake fluid.....	18264
Jordan: information on politicians, translations.....	10719
investment guarantees, agreement.....	20171
United States foreign aid program, report of study.....	19055
Jorgensen, Daniel R., Air Force chaplains, 1947-60.....	9606
Joseph, John, relief.....	18972
Joshua Tree National Monument, hydrologic and geologic reconnaissance.....	5028
Journal of engineering physics (USSR periodical): translations.....	10747, 15968, 19594
Journal of general biology (USSR periodical): translations.....	14188
Journal of higher nervous activity (I. P. Pavlov (USSR periodical), translations.....	1083, 2476, 6675
Journal of pathoneurology and psychiatry (USSR periodical): translations.....	10786
Journallism, dissemination of news and ideas as compared to broadcasting (address).....	17428
Journals: civil service.....	3515
current acquisitions.....	4126
engineering physics, translations, USSR.....	14103
House of Representatives, 87th Cong., 2d sess.....	4668
Journal of research, National Bureau of Standards.....	3815-18, 9203-6, 12894-896, 18188, 11094
National Cancer Institute.....	3814
Senate, 87th Cong., 2d sess.....	2067
Ships Bureau.....	3485
Supreme Court.....	4222

Journal—Continued	Entry
USSR, scientific, available in English, list.....	7423
JPRS series.....	644-1153, 2454-3000, 5108-5426, 6638-7182, 8437-9020, 10362-881, 12271-770, 14083-431, 15664-16264, 17573-18012, 19373-771, 20760-922.
Juab County, Utah, geology of beryllium deposits in Thomas Range.....	10266
Judaism, critique, USSR book review.....	17680
Judge Advocate General, Air Force: digest of opinions.....	3600
report, 1962.....	8134
Judge Advocate General, Army: digest of opinions.....	3600
legal service, pamphlets.....	106, 1801-4, 4453-55, 5912-13, 7670-73, 9656-57, 11535-536, 13237, 14941-942.
report, 1962.....	8134
Judge Advocate General, Navy: digest of opinions.....	3600
JAG Journal.....	3813
report, 1962.....	8134
Judge Advocates General of Armed Forces: boards of review, court martial reports, holdings and decisions.....	17344
digest of opinions.....	3600, 4795
Judges: circuit and district, retired, clarify status, reports.....	6172, 20591
Court of Military Appeals, to hold office during good behavior—hearings.....	11883
reports.....	13538, 13587
district—representation on judicial councils of various circuits, report.....	13701
tenure, report.....	6171
District of Columbia, retirement act, amend, report.....	18897
Supreme Court Justices' widows, increase annuities, report.....	20598
Judgment (logic): application to job evaluation of policy-capturing model for individual and group analyzing.....	16787
rating scale format variations, effects on.....	7626
volume reduction from photographs of complex, irregular shapes.....	11351
see also Reasoning.	
Judgments, see names of courts, etc., rendering judgments.	
Judicial Conference of United States: proceedings.....	4717, 6083, 9523, 11760
report to Supreme Court containing amendments and notes of Advisory Committee.....	6087
Judicial councils, see Courts of United States.	
Judicial procedure, see Civil procedure—District Courts.	
Judicial Procedure, International Rules Commission, see International Rules of Judicial Procedure Commission.	
Judiciary, see Courts of United States.	
Judiciary Committee, House: calendar.....	3839
committee prints.....	2055, 8002-3, 11909, 13663
District of Columbia code, supp.....	6200
hearings.....	295, 9941, 15321-322, 18062-953



# INDEX 1963

Entry	Entry
Judiciary Committee, House—Con. investigations and studies— authorisation, report..... 6105 expenses, report..... 6119 State taxation on interstate com- merce activities— expenses, reports..... 6120, 18877 extend time for filing reports, report..... 11807 reports..... 6093, 6097-6102, 6151-52, 6171-78, 7873-7912, 7924, 7928, 8842-44, 9846-53, 9864-65, 9870, 9882, 9891, 9911, 11766-791, 11806- 808, 11810, 11833, 11838, 11845- 846, 12469-495, 12497-524, 13528, 13556, 13576-577, 13581- 582, 13605, 13614, 13618, 15188- 207, 15209-210, 15212-231, 15257, 15261, 17075, 17077-100, 17108, 17115, 17141, 17147-148, 18814-837, 18866, 18891, 18901, 20459-463, 20472. study of population and immigration problems..... 296, 11009, 13663 travel authorisation, reports..... 7973, 17151 Judiciary Committee, Senate: Antitrust and Monopoly Subcom- mittee, activities, 1962, report..... 9980 calendar..... 8857 committee prints..... 331-332, 335, 2067, 2102, 6302-3, 10018, 13817, 17317, 17319, 19064, 20612. Constitutional Rights Subcommit- tee, list of publications..... 19064 hearings..... 333-334, 2068-2101, 4784-88, 6304, 8122- 25, 10019, 12022-25, 13814-816, 15392-398, 17315-316, 17318, 17320-321, 19062-63. investigations and studies— administrative practice and pro- cedure in Federal agencies— expenses, report..... 6250 report..... 8059 antitrust and monopoly laws, administration, authorisation, report..... 6275 codification of statutes of U.S., authorisation, report..... 6261 constitutional amendments, au- thorisation, report..... 6251 constitutional rights, authoriza- tion, report..... 6252 Federal charters, holidays, and celebrations, authorisation, re- port..... 6253 Federal judicial system, authori- sation, report..... 6254 immigration and naturaliza- tion— authorisation, report..... 6255 report on findings..... 8052 internal security, law, etc., ad- ministration— authorisation, report..... 6256 report..... 4768 juvenile delinquency, authori- sation, report..... 6257 national penitentiaries, exten- sion, report..... 6258 Patent Office administration and patents, etc., statutes— authorisation, report..... 6259 report..... 8058 refugees and escapees— authorisation, report..... 6260 report..... 11983 trading with the enemy act, etc., extension, report..... 6262	Judiciary Committee, Senate—Con. reports..... 4768, 6217-29, 6271, 6286, 8026-41, 8052-54, 8056-59, 8075, 9961-71, 9979-80, 11925-946, 11978-980, 11983, 13670, 13678-697, 13701, 13762, 15344, 15367-869, 17199- 228, 17243-244, 18972-19006, 19015-16, 20528, 20538, 20547- 549, 20551-570, 20588-598, 20598. Jenkins, Beatrice A., rural civil de- fense work carried through home economics programs..... 10128 Judy, Chester J., education contri- bution to effectiveness of offi- cers in scientific, etc., assign- ments..... 4404 Juices, consumer purchases by fam- ily characteristics..... 353 see also Fruit Juices. Jukeboxes: musical compositions on coin-oper- ated machines, provide royalti- ties— hearings..... 15321 report..... 17141 Juliao, Francisco, what are the peasant leagues? book re- view..... 2696 Julius Caesar, LAC60, lunar chart..... 1771 Juneau, Alaska, electric facilities of area, map..... 523 Juneau Indian village, Alaska: townsite, establish— law..... 11726 reports..... 8074, 9907 Jung, Bay Kow, relief..... 17080 Jung, Hai Yung, relief..... 20567 Jung, Johnny, relief..... 20567 Jung Yoi Sohn, see Sohn, Jung Yoi. Junla River: flood control, engineer report— departmental edition..... 4857 document edition..... 4683 Junior colleges, 2-year community, studies and surveys, 1957-61, annotated list..... 20645 Junior high schools, grades 7-9 in junior and junior-senior high schools, 1956-60, survey..... 15433 Juniper, see Cedar. Juno, see Satellites. Juno (asteroid): rectangular coordinates, 1960-80..... 7344 Jurassic period, Therapsynoecum wyomingense (Branson, 1935), possible guide ostracode to Salt Wash Member of Morrison formation..... 2344 Jurisdiction: Iowa Ordnance Plant Reservation, retrocede to Iowa— hearings..... 18921, 18924 report..... 18843 legislative— Federal enclaves, adjust, hear- ings..... 20609 Pole Mountain district of Medi- cine Bow National Forest, re- trocede to Wyoming, report..... 13719 Municipal Court for District of Columbia in civil actions, in- crease— law..... 13434 reports..... 6163, 18734 Jurisprudence, application of cyber- netics, East German transla- tion..... 12412 Jurors, see Jury. Jury, grand and petit jurors fees, in- crease, report..... 11808



# JANUARY-DECEMBER

	Entry
Justice Department:	
annual report, 1962-----	12772
appropriations, 1964-----	11876
hearings-----	11848
report-----	
Assistant Attorney General, Civil Division, nomination of John W. Douglas, hearing-----	8124
Attorney General's wiretapping program, 1962, hearing-----	4788
budget, 1964, amendment-----	7869
judicial administration, code of Federal regulations-----	6417
opinions of Attorney General-----	9020
18013, 19773-774, 20923	
Justices, see Judges.	
Juvenile Court of D.C., retirement act, amend, report-----	18897
Juvenile courts:	
probation officers training problems, workshop report-----	174
statistics, 1961-----	4600
Juvenile delinquency:	
California, research project experiments with alternates to institutionalization-----	15091
changing programs in institutions for delinquent children, problems-----	1928
foster care for delinquent girls-----	1924
gaps in State programs for offenders-----	1925
institutions serving delinquent children, guides and goals-----	11646
investigation-----	
authorization, report-----	6257
hearings-----	8122-23, 12024
print additional copies, reports-----	13633, 13767
prevention and control, extend act-----	
hearings-----	17324
report-----	17281
public institutions for delinquent children, statistics-----	6015, 15092
school's role in prevention, research symposium-----	8181
short-term juvenile problem institutes for police, list-----	1926
Juveniles, see Youth.	

## K

K.M.A.G., see United States Military Advisory Group to Republic of Korea.	
Kadib, Abdel-Latif, beach profile as affected by vertical walls-----	19131
Kahn, Alfred J., citizen's role in social welfare policy-----	20364
Kahn, B., rapid methods for estimating fusion product in milk-----	9338
Kahn, Gerald, current expenditures per pupil in large public school systems-----	2150
Kaimal, J. Chandran:	
sonic anemometer for-----	
measuring vertical components of wind velocity-----	9616
study of turbulent wind loading on missiles-----	1740
Kalaycioglu, Mehmet V., relief-----	6102
Kale, see Sea kale.	
Kalkstein, Marvin I., rhodium-102 high altitude tracer experiment, stratospheric results-----	1732
Kalman, Herbert S., computing volume of helium in cylindrical steel containers-----	16325
Kalter, Seymour S., susceptibility of baboon (Papio doguera) kidney cells to human enteroviruses-----	1775

	Entry
Kamchatka Peninsula:	
geography-----	6645
growth of intraspecies biological forms of Arctic char <i>Salvelinus alpinus</i> of Kamchatka, USSR study-----	30612
Kamel, Adel M., littoral studies near San Francisco using tracer techniques-----	6359
Kammerer, J. C., water problems in Springfield-Holyoke, Mass., area-----	19330
Kanawha County, W. Va.:	
coal-----	
carbonizing properties-----	14510
preparation characteristics-----	19867
Kansas:	
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics-----	4567
climatological data-----	3517
county business patterns, activities covered by OASDI program-----	13284
diversified milk plants, production cost of cottage cheese and frozen desserts-----	14872
electric rate book-----	20672
mineral industry-----	3062
Pennsylvania and Permian rocks, stratigraphy and paleontology-----	8334
population, 1960, characteristics-----	16683
precipitation data, hourly-----	3771
public school finance program, 1962-63-----	12076
southwest, channel widening and flood-plain construction along Cimarron River-----	19310
weather stations, decadal census-----	16671
western, water management, consumptive use, and nitrogen fertilization of irrigated winter wheat-----	16759
ZIP code directory-----	30040
Kansas City, Kans.:	
occupational wage survey-----	
departmental edition-----	7163
document edition-----	6074
principal electric facilities of area, map-----	2266
Kansas City, Mo.:	
agricultural commodity office, electronic data processing system, inadequacies, GAO review-----	19281
electric facilities of area, maps-----	518, 2266
income, education, and unemployment in neighborhoods-----	7175
municipal airport, weather observations, hourly, decennial census-----	9497
occupational wage survey-----	
departmental edition-----	7163
document edition-----	6074
Kansas City Southern Ry., accident-----	6835
Kansas River:	
flood control, engineer report-----	
departmental edition-----	423
document edition-----	317
Kanter, G. S.:	
bicarbonate excretion during hypothermia-----	4415
effect of massive sodium bicarbonate infusion on renal function-----	14920
regulation of extracellular potassium in hypothermia-----	16794
renal regulation of bicarbonate loads during hypothermia-----	4418
urine titratable acidity and ammonia excretion during hypothermia-----	13215
Kantner, H., nickel-cadmium batteries-----	7588

# INDEX 1963

	Entry		Entry
Kao-ch'an, China, archeological investigations of ancient city	6638	Katzoff, S., similitude in thermal models of spacecraft	9163
Kaplan, Irving:		Kaufman, J., effects of chemical treatment on quality of prepackaged vacuum-cooled cauliflower	13148
heavy water lattice project, annual report	7702	Kaufman, Albert, electrical resistance strain gage performance at cryogenic temperatures	7280
measurements of reactor parameters in subcritical and critical assemblies, review	11562	Kaufman, L., high-pressure-high-temperature metallurgy, research and development	7640
Kaplar, Chester W., frost heave characteristics of slag-fly ash-lime base-course mixture	12086	Kaufman, Milton:	
Kapp, Mrs. Joseph J., see Kapp, Kazuko		United States waterborne foreign commerce, 1961	13309
Kapp, Kazuko, relief	9858, 16986	Great Lakes area	15087
Kara, Kum Canal, channel completed, 1962	10791	Kauls, William M.: geodetic parameters	12884
Kara, Kum Desert, sulfur deposit, USSR investigations	14429	tesseral harmonics of gravitational field, etc., derived from camera observations of satellites	12885
Karasawa, Kazuko, see Kapp, Kazuko		Kaw Reservoir:	
Kardos, Janos, relief	8041, 15194	Arkansas River flood control, engineer report	2205
Karlson Development Corp., conveyance of mineral rights	11996	departmental edition	2076
Karnes County, Tex., ground-water geology	8340	document edition	2076
Karp, Irving M., analysis of nuclear powered supercritical-water cycle for aircraft propulsion	7230	Kawa, Walter, iron-catalyzed hydrogenation of phenyl ether, benzyl ether, and phenyl sulfide	7218
Kárpinos, Bernard D., qualification of American youths for military service	1814	Kawenski, Edward M., float dust deposits in return airways in coal mines	7208
Karro, Harold, and family, relief	6220	Kaysinger Bluff Reservoir:	
Karst:		engineer report	4855
kegelkarst, morphology and development in southern China and northern Vietnam	17772	departmental edition	4687
research, present and future, Communist Chinese study	14144	document edition	4687
Karstens, A. I., effect of weather factors on aircraft maintenance crews in Arctic areas	18482	Kazakh Soviet Socialist Republic:	
Karyokinesis:		Academy of Sciences	
bone marrow cells in mice, study of mitotic cycle by autoradiographic method, USSR	20921	activities in 1962	16034
epithelial cells of cornea in mice, study of mitotic cycle by means of tritium-tagged thymidine, USSR	16153	general meeting session	6205
twenty-four hour periodicity of mitoses in mice following action of gamma rays	17677	railroads	6829
Kasile, Joseph D., wood charcoal production in California for 1961	15537	scientific activities	6758
Kassalow, Everett M., white-collar unionism in Western Europe	19802	ukase on election districts	8673, 8714
Kassler quadrangle, Colo.: bedrock geology	14025	Kazakhstan, see Kazakh Soviet Socialist Republic	
quaternary geology and geomorphic history	10290	Kearney, N.J., accident	2440
Kastanek, Michael T., experience of other countries in dealing with technological unemployment	19124	Keat, Melborn, relief	7880, 11044, 13394
Katell, Sidney, bibliography of investment and operating costs for chemical and petroleum plants, Jan.-Dec. 1962	12831	Keech, C. F., geology and hydrology of site of Hailam Nuclear Power Facility, Nebr.	2341
Katon, J. E., infrared spectra of selected ketones, ethers and alcohols between 15 and 35 microns	11474	Keeling, Gerald F., address, Apr. 26, 1963	9612
Kattegat, lights and fog signals, list	7353, 19990	Keenan, Charles M., historical documentation of major coal-mine disasters in United States not classified as explosions of gas or dust	14493
Katz, Aaron, prediction of success in automatic data processing programming course	7684	Keep America Beautiful, National Conference, see National Conference to Keep America Beautiful	
Katz, Robert D., intensity of development and livability of multi-family housing projects, etc.	13911	Keese, Elizabeth, references on foreign languages in elementary school	12079
Katz, Saul M., list of U.S. readings on development	5097	Keith's theater, use as municipal theater in D.C., report	17121
Katzen, Elliott D., aerodynamics of missiles employing wings of very low aspect ratio	18116	Keller, W. D., clay minerals in Morrison formation of Colorado Plateau	600
		Kelley, Henry L.: flight operating problems and aerodynamic and performance characteristics of fixed-wing, tilt-duct, VTOL research aircraft	14557
		transition and hovering flight characteristics of tilt-duct VTOL research aircraft	1291
		Kelley, K. K., heats and free energies of formation of vanadates of lead and manganese	9126

Entry	Entry	Entry	
Kelly, Francis J., technological and economic problems of rare-earth-metal and thorium resources in Colorado, New Mexico, and Wyoming.....	3055	Kentucky—Continued	
Kelly, Hal J., physical, etc., properties of Pacific Northwest halloysitic clays.....	10947	population, 1960, characteristics.....	18651
Kelly, John M., remarks, Apr. 3, 1963.....	8370	precipitation data, hourly.....	3771
Kelly, Kenneth L., coordinated color identifications for industry.....	1332	public school finance program, 1962-63.....	20641
Kelly, Thomas C.: aerodynamic loading characteristics of thin-trapezoidal-wing-body combination.....	16362	southern Cumberland region, timber resources, highlights.....	19271
static longitudinal aerodynamic characteristics and surface pressure distributions for 1/15 scale model of modified 4-stage Scout vehicle.....	20999	ZIP code directory.....	20041
transonic wind tunnel investigation, etc., of Blue Scout launch vehicle.....	19927	Kentucky River:	
Kemp, Robert F., neutralizer tests on flight-model electron-bombardment ion thruster.....	16368	flood control, engineer report—	
Kemp, Lake: flood control, engineer report—		departmental edition.....	424
departmental edition.....	2208	document edition.....	223
document edition.....	2077	Kenya, official publications, bibliography.....	7184
Kenal National Moose Range, birds.....	15534	Keppel, Francis, nomination, hearing.....	8127
Kendall, Nicholas A., mineral industry of Mississippi.....	20959	Kerch' ores, USSR.....	12516
Kendrick, J. F., DHIA supervisor's manual.....	20	Kerenyi, Gabriel, relief.....	18982
Keneshen, Thomas J., computer program for solving reaction rate equations in E ionospheric region.....	1737	Kerman, Max, projectionatron application to high speed multi-channel plotter.....	12946
Kennedy, E. M., jr., cadmium plating effect on aircraft steels under stress concentration at elevated temperatures.....	5893	Kern County, Calif., borate mining, underground.....	3073
Kennedy, Harold W., panel presentation, Dec. 11, 1962.....	1425	Kernan, William J., accelerators.....	20333
Kennedy, John F., see President of United States.....		Kernenergie (periodical): translations.....	2561
Kennedy, Mabel C., relief.....	11786, 17003, 17225	Kerosene, world retail prices and taxes, 1962.....	16348
Kennedy, Richard M., economic developments in Netherlands, 1962.....	10331	Kerper, Matthew J., properties of glasses at elevated temperatures.....	9636
Kent, Cappa C.: occupational wage survey—		Kerr, James B.: mineral industry of—	
Little Rock-North Little Rock, Ark.....	1176	Vermont.....	18081
Oklahoma City, Okla.....	1175	West Virginia.....	3070
Kent, Donald P., address, Oct. 2, 1962.....	617	vacuum melting of steel.....	3056
Kent, Jack T., tables for eccentric and true anomaly in elliptic orbits.....	11091	Kerr, Robert S., memorial services.....	18767
Kent, Ohio: railroad accident.....	15661	Kerr Dam, see Robert S. Kerr Lock and Dam.....	
redevelopment area, statistical profile.....	7811	Kerr-Mills program, see Medical care.....	
Kentucky: annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties statistics.....	4569	Kerslake, William R.: charge-exchange effects on accelerator impingement of electron-bombardment ion rocket.....	11040
barite-fluorspar ores, selective flotation.....	9120	screen and accelerator grids for electron-bombardment ion thrusters.....	16363
civil rights, public schools, 1962.....	1935	Keshock, Edward G., leak-rate testing of NASA Plum Brook reactor containment vessel.....	14551
climatological data.....	3517	Kessenich, Gregory J., relief of estate.....	13492, 13676, 16978
county business patterns, activities covered by OASDI program.....	15063, 18374	Kessler, K. J., jr., sugar maple dieback.....	12178
Eastern, coal reserves.....	5014	Kessler, Matthew A., special labor force report, economic status of nonwhite workers.....	16297
electric rate book.....	6407	Kesterke, Donald G., electrowinning molten uranium metal from uranium oxide, technical feasibility.....	10959
5B redevelopment area, statistical profile.....	11691, 13358	Ketchikan, Alaska, electric facilities of area, map.....	523
Mississippian Plateau region, ground-water reconnaissance.....	12233	Ketchum, Thomas B., licensing and exchange controls in United Kingdom.....	2383
		Ketner, Keith B., geology of Railroad mining district, Elko County, Nev.....	17527
		Keto, Jorma R., fluid amplification, flow visualization, compressible fluids.....	14637
		Ketones, infrared spectra between 15 and 35 microns.....	11474
		Key to meteorological records documentation.....	7516, 11407, 13128, 14799-800, 16668-690, 20245
		Keyfitz, Nathan, presentation on Canadian population trends.....	11909
		Keystone, W. Va., longwall mining with German coal planer, Pocahontas no. 3 coalbed.....	19863

# INDEX 1963

	Entry
Keyville quadrangle, Fla., economic geology	10282
Keywords index to U.S. Government technical reports (periodical)	3819
Khadzholov, Asen I., biographic data	10859
Kharkov Oblast, Ukrainian SSR, economic developments	12741
Khirurgiya (periodical): translations	2676, 2712, 6703
Khrushchev, Nikita S.: retracts what he proclaimed in 1957 concerning Soviet economic leadership	10763
role in Battle of Dnepr, USSR study	20847
speeches and writings	17838-842
Kiamichi River:	
Hugo Reservoir, flood control, engineer report	2203
departmental edition	2078
Kiangsu Province, China, water country, area, population, etc., characteristics, Communist China book	2718
Kikapoo River, Wis.:	
flood control, engineer report—departmental edition	2206
document edition	1994
Kidd, W. J., Jr., soil erosion control structures on skidtrails	10237
Kidneys:	
and drugs, NIH supported research grants	10962
cells of baboons—	
isolation of enteroviruses	5892
susceptibility to human enteroviruses	1775
effect of massive sodium bicarbonate infusion on renal function	14920
iodide metabolism during thyroid uptake tests	16789
renal hemodynamics, effect of increased venous pressure	4503
renal regulation of bicarbonate loads during hypothermia	4418
reversible hematuria and oliguria following elevation of renal venous pressure	7721
Kier, Porter M., Tertiary echinoids from Caloosahatchee and Tamiami formations, Florida	16560
Kiev, Ukrainian SSR:	
conveyor assembly of electric measuring sets, at Tochelektropribor Plant, USSR study	16193
guidebook	10858
Scientific Society of Otolaryngologists, report on activity, 1962	20683
Kilan, Howard W., experiments in using electrochemical cell to analyze high-purity iron	7219
Klin drying, see Kilns.	
Kilns, drying of Douglas-fir lumber, change of grade, etc.	2315
Kim, Tricia, relief	18835
Kim, Yon Ok, relief	18834
Kimball, Elsie M.:	
Interior Dept. decisions—cases relating to public lands, digest	14053
20749	
Kimball, Kenneth E., interlaminar properties of 5 plastic laminates	12158
Kinematics, studies of early type stars	21022
see also Hodograph.	
Kinetics:	
carbothermic reduction of niobium pentoxide, problems, USSR study	8636

	Entry
Kinetics—Continued	
catalytic reactions, Soviet research	16873
chemical, problems in, USSR study	7002
crystal formation, USSR study	8616
hydrogen-nitrous oxide-diluent flames, sampling, measurements downstream	1306
ignition of combustible mixtures by laminar jets of hot gases—	
oxidation in Mo-Si system	19865
King, Basilio, and family, relief	7589
King, Gene H., relief	13469
King, Harold:	
remarks—	
Dec. 15, 1962	526
Jan. 14, 1963	2279
King, Joseph A., explanation of Superintendent of Document's classification system	9329
King, Margaret L.:	
educational data—	
Denmark	8165
England and Wales	20633
Ireland	8167
King, Martin L., small business use of trade association programs	1484
King County, Wash., forest statistics	2311
King Salmon, Alaska, King Salmon Airport, weather observations, hourly, decennial census	7512
King salmon of Cook Inlet, Alaska	13974
Kings Canyon National Park:	
general information	5644
map	7337
Kings River and Valley, ground water in alluvium	8348
Kingsolver, C. H., background and artificial lighting for standardized grain inspection	14863
Kingston, Wash.:	
harbor improvements, engineer report—	
departmental edition	452
document edition	222
Kinney, Edward C., annual report for 1962, Branch of Fishery Management Services	19221
Kinney, Jo Ann S., discrimination in auditory and visual patterns	9100
Kinnison, Allen F., orchard and vineyard land use, Western States	11289
Kirby, James G., crude petroleum and petroleum products	20943
Kirby, R. F., evaluation of stainless steel tubing for fuel cladding	5933
Kirby, Robert H., aerial vehicle supported by 2 unshrouded propellers	18157
Kirk, I. W.:	
differential harvesting of cotton—	
evaluation of laboratory gin for processing hand-snapped and machine-stripped cotton	1630
18399	
Kirwin National Wildlife Refuge, general information	13968
Kislovodsk, Russian SFSR, health report, general information	10865
Kiss, Elemer, bibliography on meteorological satellites	14773
Kissinger, David G., weevils of genus Maecaneta	9236
Kitchen utensils:	
china kitchenware, Tariff Commission report	9461
earthenware kitchen articles, Tariff Commission report	9460
Kitchens:	
arrangements, planning aids—	
broken-U	18180
corner storage	18438
L-shaped	13181
parallel-wall	13182
U-shaped	13179
Beltsville energy-saving design	4356



# JANUARY-DECEMBER

	Entry		Entry
Kites, moored, Federal aviation regulations	18900	KMAG, see United States Military Advisory Group to Republic of Korea.	
Kits, adaptation for M-113 vehicles, overpricing under Army Dept. contract negotiated with FMC Corp., San Jose, Calif., GAO report	13999	Knapé, Shandon D., confectionery sales and distribution, 1962	11596
Kittner, Dorothy R., supplemental unemployment benefit plans	16289	Knapp, Joseph G.: current challenges to farmer cooperatives	10101
Kittredge, C. P., detection and location of cavitation	4480	how farmer cooperatives contribute to agricultural well-being	12094
Kituba language, Foreign Service Institute basic course	21118	talk, July 19, 1962	6381
Klahr, Carl N., fabrication of semiconductor devices by neutron transmutation doping	7704	Kneeland, Natalie, practical research	8160
Klain, George J.: alterations of rat tissue cytochrome c levels by chronic cold exposure	18480	Knerr, Wallace J., relief	13503, 18997, 20411
interrelationships of cold exposure and amino acid imbalances	11503	Kniffin, Fred W., retail credit and collections, bibliography	21106
metabolic effects of methionine toxicity in rat	18470	Knight, Ewart B., problems of Tennessee's small meatpackers	1482
protein intake and cold exposure effect on liver enzymes associated with amino acid metabolism	11502	Knit goods, see Textiles—also names of clothing.	
protein metabolism alterations during cold acclimation	11501	Knobs, maximum torque exertable	7604
Klamath Falls, Oreg., consumer expenditures and income, 1960, advance report	16274	Knoll, Ethel, relief	7877
Klamath National Wildlife Refuge, see Lower Klamath National Wildlife Refuge—Upper Klamath National Wildlife Refuge.		Knowles, Doyle B., ground-water conditions at Argonne National Laboratory, Ill., 1948-60	19327
Klawitter, Ralph A., arasan-endrin rodent repellent tests on acorns	12184	Knowles, Paul H., reconnaissance for uranium in San Pedro de Atacama and Laco areas, Chile	16855
Klee, C. W., graphical determination of response of simple line hydrophone to 2 sources	18240	Knowles Dam and Reservoir, construction project, hearings	15330
Kleeb, Howard W., address, Oct. 23, 1963	21039	Knoxville, Tenn.: aircraft accident	20370
Klein, W. H., procedures and equipment for fumigating European pine shoot moths on ornamental pines	6493	McGhee Tyson Airport, weather observations, hourly, decennial census	13126, 16661
Klement, Alfred W., Jr., atomic radiation bibliography	132	Knuuttila, Kaino H., see Aunis, Kaino H.	
Klemic, Harry, geology and uranium occurrences of Lehighton, Pa., quadrangle	19293	Koberg, Gordon E., evaporation control research, 1959-60	6569
Klepfer, H. H.: materials for nuclear superheat fuel cladding	5932	Kochendorfer, Fred D., aircraft cooling ejectors	10972
specific titanium alloy design program, progress reports	9672, 14979, 14983, 16843	Kodiak Airways, Inc., accident	9736
Klieger, Walter A.: correlates of disciplinary record in wide-range sample	4463	Kodiak Island, Alaska, aircraft accident from Old Harbor, Kodiak Island	9736
peer ratings as predictors of disciplinary problems	4462	Koenig, David G., wingless vertical take-off and landing aircraft	5370
Klima, Stanley J., preliminary investigation of effect of hydrogen on stress-rupture and fatigue properties of iron-nickel-cobalt-base alloy	1287	Koerber, Thomas W., toxicity of diesel oil to Douglas-fir cones	17485
Kline, John B., small business problem studies	1473	Kofa Game Range, mammals	6461
Klinicheskaya meditsina (periodical): translations	5348	Kogon, Maurice: basic data on economy of Taiwan (Formosa)	6609
Klorer, K. H., measurement of micro-voltages	9276	economic developments in Taiwan, 1962	6611
Klyce, Donald F., mineral industry of Indiana	1214	Investment in Hong Kong	5061
Klystrons, tubes, catalog prices, non-competitive procurements, negotiated by military departments and contractors with Varian Associates, GAO review	2322	Kolkhozes, see Collectives.	
		Kollar, K. L.: adequacy of public water utilities, 1959	13257
		sewerage utilities sewer service-pipe requirements	16872
		Kollman, George, distribution and chemical forms of 2-mercaptopethylguanidine, etc., given in protective doses	7637
		Kollolan, Elizabeth, see Ismirian, Elizabeth K.	
		Kolnick, Joseph J., random deviations from stabilized cruise altitudes of commercial transports at altitudes up to 40,000 feet with autopilot in altitude hold	14587
		Komar, C. A.: ultrasonic phenomena, etc.	5473
		velocity of sound in petroleum reservoir rocks and other mediums	7205



# INDEX 1963

	Entry
Kommunist (periodical): translations	708,
1062, 2457, 2779, 2974, 5431, 6773, 6902, 8706, 8980, 10625, 12344, 12595, 14253, 15694, 16681, 17826, 17874, 19467, 20828.	
Komons, Nick A., Air Force research grant program	14015
Koon Chew Ho, see Ho, Koon Chew.	
Kootenai Indians: Confederated Salish and Kootenai Tribes of Flathead Reservation, set aside lands for, report	20480
judgment funds, disposition, report	20580
Kopstein, Felix F., auto-instructional devices	5872
Kordes, Eldon E., flutter tests of sandwich-type flat panels	10985
Korea:	
Academy of Sciences, report	8893
China boundary, study	20162
Consular Convention with U.S., text, etc.	8024
fact sheet	18326
international Communist developments	14366
military demarcation line, study	20167
North—	
central yearbook, 1960, information	1122
Communism, articles	7001,
economic development, 1961	6904
economic reports	736,
782, 898, 2537, 2579, 2883, 2911, 5358, 5423, 6935, 6989, 8462, 8588, 8601, 8643, 8832, 8873, 8978, 10406, 10452, 10464, 12537, 12700, 14155, 14357, 15091, 15989, 16002, 16114, 16179, 16223, 16245, 17668, 17721, 17762, 17860, 17912, 17964, 20863, 20914.	
economy and trade	12662
freight shipments to, international regulations, Austrian study	19421
gasetteer, official standard names	19291
growth rate and balance in economic development, report	12489
heavy industry development, policy of Labor Party	16137
history, recent	10626
labor party policy for development of light industry	17882
living conditions of repatriated	19562
machine translation, research	15825
political and sociological information, translations	675,
709, 2538, 2903, 2909, 8461, 8587, 8644, 12426, 15959, 16115, 16187, 16202, 17925, 20864	
scientific publications and their authors	16028
train and route schedules for 1963	8678
yearbook, 1961	6959
political and economic developments in last decade	19729
publications in National Agricultural Library	14594
Republic—	
agricultural commodities, agreement	3356, 16597, 16609, 20174
diving women, physical insulation	1759
economic developments, 1962	8401

	Entry
Korea—Continued	
Republic—Continued	
educational commission and financing exchange programs, agreement	16588
loan of additional vessels, agreement	11317
relief supplies and equipment, inland transportation charges, agreement	7455
student movement, nature and direction	10750
surplus property disposal, agreement	11318
United States-Korean relations, historical summary and chronology of important developments, 1834-1962	1568
United States local currency military budget support program, GAO review	2327
United States Military Advisory Group, KMAK in peace and war, history	5468
sailing directions, change	12939
Korean War, 1950-53:	
Marine Corps operations	1194
role of U.S. Military Advisory Group	5468
veterans, see, in main alphabet, Veterans	
Kormanik, Paul P.: International 1/4-inch board-foot volume table for shortleaf pine in Virginia-Carolina Piedmont trees and shrubs of Lee Experimental Forest, Buckingham County, Va.	10251
Koski, Augustus A., Hungarian, basic course	13069
Koss, Jan, relief	15196, 18975, 20398
Kotin, Paul, panel presentation, Dec. 11, 1962	1416
Kovacsina, T. A., high temperature properties of sodium and potassium	7371
Kovalik, Milan J., oxidizing Pittsburgh-bed coal	14522
Kozan, G. R.: dustproofing and waterproofing of soils, laboratory studies of soil waterproofing materials	17413
soil stabilization, quicklime as stabilizing material, investigations	15450-460
Kozlov, F. R., speech, Feb. 26, 1963	8880
Kracek, F. C., melting and transformation temperatures of mineral and allied substances	10295
Kramer, Francisco V., Guatemalan press evaluation	2693
Kramm, Elizabeth R., families of mongoloid children	7770
Krasnoyarsk Territory, Russian SFSR, industrial Krasnoyarsk today	17904
Krassilnikova, Kriss, microorganisms, new class, USSR study	17702
Krans, John F., Olustee Arboretum, performance of 67 species of forest trees	19269
Krause, Helmut G. L., astrodynamic constants	14547
Kraut, see Sauerkraut.	
Kretlow, K. W., lawn diseases, and how to control them	18426
Krempasky, George T., precast concrete mine supports	10943, 14518
Krendel, Ezra S., natural pilot model for flight proficiency evaluation	18225

# JANUARY-DECEMBER

Entry	Entry	Entry
Kricklich, Joseph : mineral industry of— Connecticut -----20954 Maine -----19849 New York -----1218 Ohio -----1220 Rhode Island -----19853	Kuokka, Hubard D., U.S. marine operations in Korea, 1950- 53 -----1194 Kupper, Donald H., geology of Calamity Park area, Custer County, S. Dak -----5018 Kurmas, Kazimierz, relief -----15218, 20564 Kurmas, Stanlaw, see Kurmas, Kazi- mierz. Kurmas, Zdzislaw, relief -----15218, 20564 Kurtzrock, Roy C., pulverized coal- fired furnace, process develop- ment in removing sulfur di- oxide from hot flue gases -----20964 Kushan, Manchuria, flotation of iron ores at Ta-Ku Shan plant, Communist China study -----8900 Kuskokwim River Basin, rhyolite mercury prospect, trenching and sampling -----3096 Kusler, David J., gravimetric method for analyzing blast furnace top gas -----5494 Kussoy, Marvin, local pressure dis- tribution of blunt delta wing for angles of attack up to 35° at Mach numbers of 3.4 and 4.7 -----3148 Kuster, William V.: fluorspar and cryolite -----19832 fluorspar production, 1962 -----18071 gypsum -----19884 Kuwait: establishing business -----10338 market for U.S. products -----8377 Kuybyshev, Russian SFSR, guide- book of city -----6766 Kuybyshev Reservoir, hydrobiologi- cal regime, USSR study -----16123 Kwajalein Island, occupancy, compen- sation, Court of Claims to ad- judicate claims, report -----9661 Kwangsi Province, China, climate -----1117 Kwangtung Province, China, indus- trial plants and enterprises, etc., advanced collective and producer units, list -----15842 Kweichow Province, China, economic geography -----8438 Kyanite: and related minerals, minerals year- book chapter -----14502 flotation of kyanite-quartzite rock, Graves, Mt., Ga -----16338 Kyongke yongu (periodical): translations -----6889 Kyser, A. C., pressure stabilized structures -----11080	
Krislov, Joseph, survey of State and local government retirement systems, covering workers also covered under Federal old-age, survivors, and disability in- surance program, 1961 -----3244 Kromer, George W.: remarks, summary, Nov. 29, 1962, tung oil supplies scarcest since World War II -----2140 U.S. castorbean and oil production increases again -----8151 Kruger, Paul, meteorological evalu- ation of radioactive fallout -----12050 Krumholz, Louis A.: ecological survey of— limnology of White Oak Creek and Lake -----11566 vertebrate fauna of White Oak Lake and environs -----11567 White Oak Creek, 1950-53 -----9684 Kramwiede, Grace L., educational data, Cuba -----13848 Krupinski, Kazimierz, relief -----9846 -----16982, 17211 -----14356 Krustanov, Lyubomir K., biography Krutstn, antibiotics, morphological action on cells of ascitic form of Ehrlich's tumor, USSR study -----6704 Krypton isotopes, chemical reactions, Kr-85 clathrate analytical techniques to measure oxida- tion-reduction products in liquid state, development -----18594 Kryter, Karl D., effects of spectral content and duration on per- ceived noise level -----9191 Kuala Lumpur, Malaysia, independ- ence proclamation, celebra- tion -----19624 Kubicek, William, thoracic cage impedance measurements, cali- bration of impedance pneumo- graph -----16801 Kueker, Arthur F., monochromator graph -----14989 Kuehn, Donald M.: wavelength modulator -----1919 Kuehn, Donald M.: laminar boundary-layer separation induced by flares on cylinders at zero angle of attack -----20991 pressures on blunt cylinders for equilibrium and nonequilib- rium air at hypersonic speeds -----4929 Kuhli, Ralph, address, Oct. 29, 1962 -----3062 Kuklis, A., mineral industry of Kan- sas -----12368 Kukovodstvo po khirurgii, transla- tions -----14414 Kuleshova, Rosa, rare phenomenon, vision in her fingers, USSR study -----4841 Kumar, Shiv S., models for stars of very low mass -----19022 Kunkel, Fred, hydrologic, etc., recon- naissance of Pinto Basin -----5028 Kunkle, W. Merrill, soil survey of Chester and Delaware Coun- ties, Pa -----13056 Kuo, Leslie T. C.: Communist Chinese periodicals in agricultural sciences -----12890 Oriental serial publications in zoological sciences -----16414	L L-103, hydrolysis, nutrition for chil- dren, USSR study -----5220 L series -----6020 Labels: commercial, copyrighted -----2108, 19071 economic poisons, labeling with reg- istration numbers -----18917, 19041 hearings -----19034 hazardous substances labeling act, notices of judgment -----17469 inspected and graded poultry prod- ucts -----13139 labeling requirements— Belgium -----2433 Republic of South Africa -----6603 paper, gummed, Federal standard -----4931 petroleum products for household use, how to comply with Fed- eral hazardous substances la- beling act -----6473 prohibit unfair and deceptive label- ing, hearings -----12025 read, on food, drugs, etc., FDA publication -----19246	

# INDEX 1963

	Entry
<b>Labor:</b>	
agricultural productivity, effect on unemployment (address).....	3011
American, 1962, in retrospect.....	7141
charts, statistical developments.....	3821
code of Federal regulations.....	10168
conditions—	
Afghanistan.....	18047
Bahrein.....	18051
Burma.....	19797
Ceylon.....	18050
Indonesia.....	18049
Japan.....	18048
Thailand.....	20935
Tunisia.....	19798
Yemen.....	20936
contracts, Israeli Communist press comments.....	825
counseling and employment services for special worker groups, supp.....	4838
Cyprus.....	14461
developments abroad.....	3822
educational attainments of workers, Mar. 1962.....	16295
emergency loans to Florida vegetable growers.....	6385
establishing labor norms, use of linear programming, USSR study.....	8715
Indonesia.....	20927
industrial workers, publications list.....	12980
international labor (periodical).....	15658
international study, Miners' International Federation.....	5099
irregularities in garment industry, investigate, hearings.....	2048
Korean labor party policy for development of light industry.....	17882
labor digest.....	18047-51, 19797-798, 20935-936
labor force—	
and employment, 1960-62.....	16296
employment problems of technological change and increased automation (address).....	9772
experienced civilian, industry, census of population, 1960, supplementary reports.....	1881
experienced civilian, occupations, census of population, 1960, supplementary reports.....	4575
future shape (address).....	16293
gross changes, problem in statistical measurement.....	12808
monthly reports.....	3614, 3921
people, skills and jobs, utilization problems.....	20924
projections to 1976 and 2000.....	3250
special reports.....	9078, 16294-297
who are working mothers?.....	18134
workers, marital and family characteristics, Mar. 1962.....	9078
labor in America, 1918-63, 50 years of progress.....	7137
labor market and employment security.....	3823
statistical supplement.....	3824
markets—	
area labor supply classifications.....	19123
area trends.....	3461
areas, directory, supplement.....	20648
Employment Service participation.....	4834
occupational earnings, 1962-63.....	9079
policy in relation to economic growth.....	19783
wages and related benefits, 82 labor markets, 1961-62.....	3024
departmental edition.....	1977
document edition.....	1977
women and girls, status and activities today and tomorrow (address).....	14807

	Entry
<b>Labor—Continued</b>	
missiles, spacecraft and aircraft industries, developments.....	13874
mobility and worker adaptation to economic change in U.S.....	18018
mobility, effect of private pension plans.....	10910
monthly labor review.....	3914
reprints.....	3037-38, 5458, 9078, 16294-297, 19801-804.
nonwhite workers, economic status, 1955-62.....	16297, 19801
older handicapped workers, vocational rehabilitation.....	13112
older workers, performance in industrial retraining programs.....	14475
outlook for costs (remarks).....	7178
Peru, problems.....	2588, 2828
physiology, problems related to technical progress, USSR study.....	16220
places of work and transportation to work, census of population, 1960.....	4576
potential for expanding forest industries in northeastern Minnesota.....	6513
productivity—	
and size of industrial enterprises, USSR translations.....	8669
comparison of various countries, USSR study.....	2593
in agriculture, calculation, Chinese study.....	967
measuring in monetary terms, USSR study.....	12401
role of scientific and engineering personnel in increasing, USSR study.....	19503
theory and problems in science and technology development, USSR study.....	8837
publications, price list.....	12979
requirements for hospital construction, errata sheet.....	14463
self-interest principle in transition from socialism to communism, USSR study.....	12765
skilled workers—	
building trades, employment in mid-1960.....	1187
occupational outlook.....	5459
steel industry, output per man-hour indexes, methods and procedures for developing.....	12811
training and upgrading unskilled and semiskilled workers (address).....	19776
transformation of complex labor into simple labor, Communist China study.....	5177
USSR—	
close cooperation between scientists and practical workers.....	6662
improving scientific-technical and cultural levels of workers.....	20846
industrial workers, awards.....	15740
law on incentives.....	6867
laws on selecting by competitive methods.....	5191
productivity in agriculture.....	6915
productivity raising through composite plans.....	6741
specialization, importance.....	20906
translations.....	663, 726, 740, 924, 948, 1115, 2681, 2778, 5172, 5297, 6747, 6775, 7053, 7091, 8516, 8648, 8669, 8930, 10364, 10447, 12818, 12882, 14090, 14192, 14240, 15912, 19412, 20827.
wage earners, improving standards of work.....	9040

# JANUARY-DECEMBER

	Entry
Labor—Continued	
work stoppages—	
monthly release—	4312
1962, final tabulations—	10923
workers education, uptrend—	20938
see also Employment—Farm labor—	
Hours of labor—Industrial relations—Labor standards—Manpower—Migrant labor—Occupations—Unemployed—Wages—Women—also headings beginning Labor.	
Labor and Public Welfare Committee, Senate:	
additional professional staff and clerical assistants, report—	6263
calendar—	3858
committee print—	15400
hearings—	2103
4789, 6305, 8126-28, 10020-21, 12026-27, 13818, 15399, 17322-323, 19065-66.	
investigations and studies, migratory labor, authorization, report—	6264
reports—	8062
0973, 9982, 9991, 11950, 11959-963, 11968-973, 13761, 15355, 17278, 17281, 17283, 19012, 19019, 19021, 20572, 20585, 20587.	
Labor consultants, see Consultants.	
Labor Department:	
anniversary, growth, achievements, etc. (remarks)—	7136
appropriations, 1963, limitation and supplemental, proposal—	13461
appropriations, 1964—	
hearings—	7981, 9923, 15373
law—	20425
reports—	9874, 15356, 18855
Assistant Secretary of Labor, nomination of Patrick Daniel Moynihan, hearing—	8127
budget, amendment—	11922
challenge and change, brief history, 1913-1963—	7135
50th anniversary celebration, challenges, goals, etc. (addresses)—	7133, 7138
general information—	3015
history, 1913-63—	7134
Library, list of recent additions—	4183
on its 50th anniversary, achievements and challenges—	9027
policies on unemployment compensation payments to former Federal civilian employees and ex-servicemen for more than one benefit year, GAO review—	12215
practice of paying unemployment benefits to former employees of post exchanges and similar activities of Armed Forces, GAO review—	14005
press releases—	4067
report, 1962—	12776
role in apprenticeship (remarks)—	9029
role in labor-management relations, references—	14442
sponsored conference with college presidents and executives, on preparation and motivation of Negro youth for employment—	
Jan. 1963—	5430
Apr. 1963—	14443
May 1963—	18017
terminal leave treatment in determining unemployment compensation, GAO review—	10267
Under Secretary of Labor, nomination of John F. Henning, hearing—	2103

	Entry
Labor disputes:	
emergency board reports—	
Eastern, Western, and South-eastern Carriers' Conference Committees—	12082
Railway Express Agency, Inc.—	391
maritime labor legislation, hearings—	9942-43, 15323
national emergency, selected references—	9033
railroad work rules dispute, settlement—	
hearings—	15381, 17175
law—	17038
reports—	17131-17132, 17257
see also Industrial arbitration—Industrial relations—Strikes and lockouts.	
Labor force, see Labor.	
Labor injunctions, see Injunctions.	
Labor laws:	
and practice in—	
Bolivia—	9044
Ceylon—	7142
Columbia—	9043
Costa Rica—	9045
Guatemala—	9047
Iraq—	9046
and their administration, convention proceedings of International Association of Government Labor Officials, discussion—	10886
effect on placement of young workers—	12810
Federal, current, with legislative action, 1789-1962—	18932
four areas of developing, resume and rationale (address)—	5629
State, affecting women—	
Arkansas—	9511
Michigan—	11414
Ohio—	11415
State anti-injunction laws, major provisions, discussion—	9036
State legislation, 1961-62, annual digest—	16268
State legislation, 1962—	3040
women, Protective Legislation Committee report—	20081
see also Employers' liability and workmen's compensation—Labor standards.	
Labor management, see Industrial relations.	
Labor-Management Policy, President's Advisory Committee on, see President's Advisory Committee on Labor-Management Policy.	
Labor management relations act, see Industrial relations.	
Labor-management reporting and disclosure act of 1959:	
bonding requirements under Landrum-Griffin act, investigation, hearing—	11891
financial reporting, BLMR guide—	5431
informational documents—	18021
reporting requirements for employer and labor consultant—	12777
reports required from labor officials and employees—	18022
rights of union members—	18023
union safeguards—	18024
what is required under law, general information—	18025
Labor-Management Reports Bureau:	
financial reporting guide—	5431
research opportunities, possible topics, outline—	14445
summary of operations, 1963—	18026
technical assistance aid (series)—	12777
Labor markets, see Labor.	



# INDEX 1963

	Entry
Labor organizations, see Labor unions.	
Labor relations, see Industrial relations.	
Labor standards:	
fair labor standards act—	
agriculture, processing of agricultural commodities, etc.	18365
amendments of 1963—	
hearings	10021
report	11970
annulment or withdrawal of certificates for employment of learners, handicapped persons, etc.	18366
application to—	
automotive parts wholesaling.	5766
Canal Zone	9485
canning industry	20229
contract mail carriers	5765
fishing and operations on aquatic products	9486
forestry or logging operations	16648
laundering, cleaning, or repairing establishments	11878
background information	20227
child labor provisions, extend to employment in agriculture	
hearings	10021
report	11970
coverage of wage and hours provisions—	
construction industry	18364
general	7504, 20230
defining terms, executive, administrative, professional, etc.	14770, 20231
definition of area of production—	9487
employment—	
handicapped persons	16653
learners	16651
student learners	14771
student workers	16654
handling and processing of agricultural products, evaluation of exemptions available, errata	1590
laundry, hotel, restaurant, bar, and hospital workers, coverage, extend, investigation, hearings	7994
operation, general information—	20228
overtime compensation	16645
overtime pay, basic rates for computing	9488, 18362
radio and television station employees, exemption from overtime pay regulation	3396
records to be kept by employers, regulations	5767-68
reduce maximum workweek, hearings	15307
retailers of goods or services	16646
services to public	21154
talent fees, defining terms	3397
wage-hour law in small firms	5718
wages, minimum, report to Congress, Jan. 1963	7505
wholesale or bulk distribution of petroleum products enterprises, employment exempt from overtime pay requirements	1591
written assurances with respect to hot goods	16649
safety standards	4166
Labor Standards Bureau:	
bulletins	1156, 3016-17, 5432-33, 10886, 12778-79, 14447, 16268, 18027
leaflets	5434, 16270, 19784
selected publications	5435

	Entry
Labor Statistics Bureau:	
BLS report series	1158-67, 3023, 5436-37, 7142-60, 9043-50, 10890-898, 12782-790, 14450-461, 16272-275, 18031-032, 19785-791, 20926-927
bulletins	1168-78, 3024-34, 5438-50, 7161-69, 9051-61, 10894-905, 12792-807, 14462-478, 16276-291, 18033-41, 19791-794, 20928-930
major programs, 1964, summary—	19800
publications	5482
seasonal factor method	12791
studies in industrial relations, July 1953-62, directory	1180
Labor Statistics, Interstate Conference, see Interstate Conference on Labor Statistics.	
Labor surplus, see Unemployed.	
Labor turnover:	
employment and earnings (periodical)	3614
factory, monthly release	3637
Labor unions:	
Brazil, rural unionization	2583, 2803
Chinese trade unions	19511
Christian trade unionism in Americas	2525
Christian trade unions, international federation, directory—	15657
constitutions, disciplinary powers and procedures	18028
conventions, 1963, list	14484
directories, Asia and Australasia	19364
election report glossary	18200
entering collective bargaining relationship for 1st time, information (address)	11113
financial reporting, BLMR guide	5431
Japan Socialism Reform Movement Preparatory Council comments	1038
labor, its role and responsibilities of leadership in nation's economy (address)	9025
labor-management reporting and disclosure act—	
bonding requirements, investigation, hearing	11891
funds, safeguards	18024
reports, data for labor research—	14445
reports required from labor organizations	18021
reports required from union officials and employees	18022
rights of union members	18023
local and single-employer, unaffiliated, United States, 1961—	
departmental edition	1178
document edition	283
national and international in U.S., 1961, directory, additions, corrections, and deletions	9051
North Vietnam, party resolution on role in industrialization, etc.—	15722
see also Collective bargaining—also names of unions.	
Laboratories:	
clinical procedures	9267
explosives, propellants, and pyrotechnic safety	1373
military construction, investigational projects, engineering and design, regulation	6376
planning, for general hospital	11237
radiation biology experiments	15015
standards, conference proceedings, 1962	18189
see also Medical laboratories—also names of laboratories or places where located.	
Laboratory animals, see Animals.	



# JANUARY-DECEMBER

Entry

67.	Laboratory apparatus and supplies, Federal item identification guides for supply cataloging, supplements	3656
43-	Laboratory procedures in clinical bacteriology	13243
790.	Laboratory procedures in clinical hematology	13242
31-	Laboratory techniques for rearing <i>Heliothis</i> species on artificial medium	18391
-78.	Laboratory techniques in space environment research	5552
807.	Lacey, Robert E., demineralization by transport depletion	20752
33-	Lackawanna River: flood control, engineer report—departmental edition	2207
800	document edition	2075
443	Iaco, Chile, uranium reconnaissance in area	16855
791	Lacquer and lacquering: current industrial reports	3574, 9718
180	Federal test method standard	8263
	Lacreek National Wildlife Refuge, general information	4968
	Lactates: blood lactate analysis	16806
	cerebral excess production during hyperventilation of anesthetized dogs	80
	Ladd, David L.: addresses, etc.	
	Nov. 26, 1962	1383
	Nov. 28, 1962	3251
	Apr. 1, 1963	9322
	Aug. 14, 1963	16474
	Aug. 17, 1963	16481
	Sept. 18, 1963	20018
	Ladd, Richard S., maps showing explorers' routes, trails & early roads in United States, annotated list	1192
	Ladik, Janos, Czechoslovakian study tour	17651
	Ladoga apparatus, see Phototelegraphy	
	Lafore, William J., Jr., testing + training—success	2176
	LaGow, H. E., results of micrometeorite penetration experiment on Explorer VII satellite (1959 Iota)	9180
	La Grange, Ill., population, special census	6001
	Lagrange's theory of three-body problem	3129
	Laguna Atascosa National Wildlife Refuge, birds, general information	6458
	Laine, Charles O., ballistically deployed pilot chute	7608
	Laissez faire, promise of free enterprise (remarks)	9794
	Laitone, Edmund V., higher approximation to nonlinear water waves, etc.	19130
	Lake. see name of lake, except when occurring as first word of name of town, etc.	
	Lake Ashley, designate, report	20487
	Lake Bronson, Minn., ground-water exploration and test pumping in area	14083
	Lake Erie, Battle of, 150th anniversary medal, reports	13751, 18850
	Lake Erie, Battle of, Sesquicentennial Celebration Commission, see Battle of Lake Erie Sesquicentennial Celebration Commission	
	Lake Mead Base, Nev., ground-water conditions in vicinity	19328

Entry

	Lake Mead National Recreation Area, administration, report	15353
	Lake Milton, Ohio, aircraft accident	13313
	Lake O'Mahoney, designate, reports	18716, 20487
	Lake States, see Great Lakes States	
	Lake States Forest Experiment Station: report, 1962	13962
	station papers	573-576, 6488
	technical notes	577-579
	Lakes: chemical composition, geochemistry data	6558
	climatic review	3883
	Columbia River basin, change of storage	4212
	ice sheets, load test data	19137
	principal lakes of United States	19304
	reclamation, recreation facilities, region 4	1440
	see also names of lakes	
	Lamale, Helen H., remarks, Aug. 1963	19046
	Lamar, Mo., railroad accident	14079
	Lamb, Lawrence H., aeromedical evaluation for space pilots	14897
	Lamb, U.S. grades, economic effects	6316
	Lambert cosine law, passive communication satellites with Lambertian surfaces	18144
	Lamberti, Joseph M., compatibility of cesium vapor with selected materials at temperatures to 1200°F	16369
	Lambs: crop, 1962	9443
	crop, 1963	18342
	on feed—	
	Jan. 1, 1963	7464
	Mar. 1, 1963	11341
	prices received by farmers, U.S. and States, 1909-61	5844
	Laminated materials: hardwood block flooring, standard of trade	7730
	vinyl-metal laminates, standard of trade	1837
	see also Plastics	
	Lamps, Federal item identification guides for supply cataloging, supplements	3656
	see also Electric lamps	
	Lanark, N. Mex., railroad accident	19369
	Lancaster County, Va., soil survey	18058
	Land, Aldyth K., dry cargo service and area report, etc.	3048
	Land: acquisition and development financing, conventional loans	3554
	agricultural, in Alaska, provide for development, report	13724
	agricultural lands, irrigation, U.S. census of agriculture, 1959	170
	cropland conservation reserve contracts, extension, report	19020
	donations for roadway entrance, Great Smoky Mountains National Park, accept—	
	law	17050
	reports	9876, 17263
	exchanges, Pacific Northwest region, GAO review	2325
	exurban development in selected areas of Appalachian Mountains	12049
	Gunnison River Basin, Colo., water and related land resources	13193
	irrigated, salt balance and leaching requirement	18192
	land and water conservation fund, establish, hearings	8117, 13655, 15388
	listing for private redevelopment	8390

# INDEX 1963

	Entry		Entry
<b>Land—Continued</b>		<b>Lander County, Nev., Lynch Creek, beryllium-tungsten prospect, sampling</b>	1252
listing in urban renewal project areas available for private redevelopment	3391, 14756	<b>Landers, W. S., coking-rate study on commercial blend of western coals</b>	19861
errata	16639	<b>Landfills, see Refuse.</b>	
number of farms and land in farms, U.S. 1950-63, by States, 1961-62	9446	<b>Landing (aircraft):</b>	
open-space program guide	3392	airborne ILS glide slope equipment for air carrier aircraft technical standard order	8221
plot program for cropland conversion (excerpts from talk)	16734	all-weather landings, cockpit displays, control-display integration program	5876
radioactive contamination by insects emerging from contaminated water bodies, USSR study	6885	contact conditions of 2 jet-transport flight simulators	1293
relationship between vegetation and relief, Hungary	17830	equipment, Federal item identification guides for supply cataloging, supplements	3660
settlement in Israel, information	6825	GETOL configuration, ground effect, feasibility and potential, research program	9465
shifts in use, loans to rural associations, etc.	470	GETOL research program final report	21141
subdivision regulations	619	instrument landing system—	
submerged land cases and acts, shore and sea boundaries	198	glide slope equipment, maintenance, handbook	20659
submerged, place within jurisdiction of Governments of Guam, Virgin Islands, and American Samoa, reports	9862, 19040	installation drawings	10110
<b>use—</b>		lift-drag ratios of 3 to 4, delta-wing interceptor airplane	10997
activities and recreation on national forest lands, GAO review	8320	lunar propulsion considerations	5610
Hawaii, water storage capacities of soil under different uses	17484	off-runway, unprepared surfaces, C-130B, etc., capabilities	11484
in orchards and vineyards, problems and conservation treatment, Western States	11289	standard instrument approach procedures, Federal aviation regulations	13898
National Conference on Land and People (summary remarks)	1728	visual boundary for immediate perception of vertical rate of descent, investigation	5591
projects in metropolitan areas, approval by HHFA, hearings	17313	water landings of winged reentry configuration with outboard folding wing panels	10692
team approach to better rural programs (speech)	14894	<b>X-15 airplane—</b>	
urban open space, preserving	11368	behavior during touchdown and runout for 17 landings	7241
wildland management for flood prevention, model for evaluating	6502	landing loads and dynamics	11015
see also Indian lands—Natural resources—Public lands.		<b>Landing (spacecraft), see Spacecraft.</b>	
<b>Land banks, see Federal land banks.</b>		<b>Landing gear:</b>	
<b>Land conservation fund, establishment, provide, hearings</b>	292	tricycle skid-type, slideout dynamics of vehicle	11071
<b>Land-grant colleges:</b>		errata	19911
and State universities, origins	18740	winged reentry vehicle, having yielding-metal shock absorbers, landing characteristics	1294
and universities, statistics	380, 387	<b>X-15, aerodynamic loads and control-system contributions</b>	19040
half-century of salaries, changes	368	<b>X-15, behavior during touchdown and runout for 17 landings</b>	7241
new opportunities and bigger challenges (remarks)	1687	<b>Landing party manual, United States Navy, 1960, change</b>	1865
salaries and fees, 1962-63	13862	<b>Landing strips, see Runways (aeronautics).</b>	
water resources research centers, establish—		<b>Landmarks in public land management</b>	3043
hearings	8121, 17170, 20499	<b>Landrock, Arthur H., effects of space environment on plastics, summary with bibliography</b>	348
report	8068	<b>Landrum, Emma J.: tabulation of section aerodynamic characteristics, at Mach numbers of 1.61 and 2.01 swept wings, etc.</b>	3120
workers in agricultural subjects	14850	wind-tunnel pressure data and section aerodynamic characteristics—	
<b>Land Management Bureau:</b>		cambered and twisted wing, errata	3126
administration and management of public lands (remarks)	20750	trapezoidal and delta wing, errata	3127
general information	3042, 19808	<b>Landrum-Griffin act, see Labor-management reporting and disclosure act of 1959.</b>	
geologists, examination announcement	16955		
information about public lands	9083		
landmarks in public land management	3043		
press releases	4068		
surveying instructions, manual, supplement	16301		
<b>Land tenure:</b>			
farm, graphic summary, census of agriculture, 1989, special reports	1902		
research, scope and nature, 1962	16417		
<b>Landau, Emanuel, epidemiologic view of chronic pulmonary insufficiency in U.S.</b>	3280		
<b>Landau, Lev D., USSR Nobel prize winner</b>	10663		

# JANUARY-DECEMBER

	Entry
Landsberg, H. E.:	
Berkeley Springs, W. Va., climatic summary	9489
panel presentation Dec. 11, 1962	1417
Lane, Henry C., soil survey of Claiborne County, Miss.	18320
Lane, W. B., radiochemical and physical measurements of debris from underground nuclear detonations	11578
Lane, William H., remarks, Oct. 17, 1963	19816
Lane County, Oreg., geology of Antlauf and Drain quadrangles	5015
Lanes, Stephen, computer program for calculating neutron interaction between cylindrical storage containers	11537
Lanford, Wade E., smoke-trail vehicle for application to wind-shear measurements up to 80,000 ft., development	20094
Lange, E. A., tensile properties of explosively formed mild-steel plate	11169
Language and languages:	
aerospace age, glossary	13208
cybernetics and mathematical linguistics, Rumanian study	10762
Federal financial assistance for strengthening instruction in public schools, regulations	19099
guidelines	20634
foreign:	
elementary school references	12079
guides, price circular	3262
modern, evaluation and testing in teaching	4815
secondary school teachers, source materials	2169
addendum	8157
teachers with inadequate knowledge, technique evaluation, etc., final report	20632
linguistics, question of, USSR	10809
machine translation—	
and applied linguistics, translations	14321
language models	14254
mathematical linguistics, Rumanian study	8525
national defense education act—	
fellowships, postdoctoral awards, 1964-65	12069
foreign language fellowships, approved languages	19104
language development program—	
institutes—	
manual	12070
program, 1963-64	2166
research completed, etc., list	4818-19
language laboratory facilities, technical guide	10072
NDEA and higher education (periodical)	3954
reform, machine translation	10465
Russian serials translated into English, list	1191
see also Electronic computers—	
also names of languages.	
Lanier, Sidney P., direct energy conversion and systems for nuclear auxiliary power (SNAP)	7708
Lanner, R. M., rooting of Douglas fir and true fir cuttings	6498
Lanni, Michelina, relief	6226
Lanche, Arnold M.:	
lithium	12832
strontium	12840
Lansdale, Edward G., lecture Sept. 26, 1962	18534
Lantern slides, medical subjects, teaching aids catalog	18549

	Entry
Laos:	
Communist threat to Laos	11523
gazetteer, official standard, names	2337
general information fact sheet	13065
neutrality, protocol, etc.	20178
Thailand boundary, study	20165
United States contribution for supervision and control, report	13773
La Paz, Bolivia, riots of Oct. 26, 1962	928
Lapel buttons:	
gold star, for widows, etc., of members of Armed Forces who lost their lives in cold war incidents—	
hearing report	13633
	13542
Lard:	
futures trading and open contracts	3752
production, United States, by months	11335
Laredo, Tex., Laredo Air Force Base, weather observations, hourly, decennial census	16663
Larkin, James E., iron and steel scrap	19841
Larkins, Herbert A., salmon catches in monofilament, etc., gill nets	15520
Larkspur, livestock poisoning in Western States, reducing losses	14856
Larocca, Joseph J., maritime accident statistics, base for accident prevention	9041
Larsen, Ralph L., motor vehicle emissions and their effects	1412
Larson, E. H., linings for irrigation canals	16347
Larson, K. H., fallout from buried nuclear detonation	14995
Larson, L. P., mineral industry of Arizona	1211
Larson, Nellie G., contract farming and vertical integration	18182
Larson, Robert W., Georgia's timber	19272
Larson, Terry J., calibrations, etc., pressure-type airspeed-altitude systems of X-15 airplane	7291
Larson, Wilbur, table of attenuation error as function of vane-angle error, etc.	12901
Larvae:	
gypsy moth early-instar, determining sex	10233
mackerel-like fish from Indian Ocean, USSR study	14186
see also names of insects, etc.	
Larvicides, compounds affecting house fly larvae, studies	16711
La Sal Mountains, geophysical investigations	2346
Las Cruces, N. Mex.:	
engineer report	
departmental edition	455
document edition	314
Lasers:	
Fabry-Perot, resonances	7605
for aerospace weaponry	5852
injection materials, research and investigation for applications	9627
Lasky, S. G., remarks, June 6, 1963	11671
Lassen County, Calif., Honey Lake Valley, water-resources of southeastern part	8350
Last days of Marshal Tukhachevsky, USSR	10389
Las Vegas, Nev., McCarran Field, weather observations, hourly, summary, decennial census	21165
Las Vegas Valley, ground-water conditions in vicinity of Lake Mead Base	19328
Lateral stability, see Stability of aircraft.	

# INDEX 1963

	Entry
Laterite:	
geneals and hardening in soils.....	1780
nickel-bearing deposits, Pine Flat and Diamond Flat areas, Del Norte County, Calif.....	9132
Latin America:	
aboriginal cultural development.....	14695
agricultural production for 20 countries, indices.....	2135
agriculture, speech by Cuban delegate at FAO conference.....	2706
alliance for progress—	
American partnership.....	17566
5-cent commemorative stamp (poster).....	16482
future goals (address).....	5906
programs and goals (address).....	12280
report, July 1-Dec. 31, 1961.....	9834
report, Jan. 1-June 30, 1962.....	17072
report on study mission.....	8023
print as S. Doc., report.....	20571
Venezuelan comments.....	751
Castro-Communist subversion in Western Hemisphere—	
hearings.....	6194
reports.....	6195, 7956
Christian trade unionism in Americas.....	2525
communism and revolution, translations.....	8981
Communist offensive.....	7661
contributions to hydrology of Latin America and Antilles (series).....	614, 15619
education, current situation.....	17364
foreign operations appropriations, 1964 hearings.....	18018
Kremlin policy on, Italian study.....	882
meeting Communist threat.....	7662
press usage of abbreviations, glossary.....	12696
private U.S. investments, improve flow, report.....	9783
progress, and U.S. policies (remarks).....	530
seminar of women, Bolivian articles.....	17815
State Department activities, 1963.....	13070
story of inter-American cooperation.....	1512
students from, West German assistance.....	5365
study mission, report.....	9863
U.S. aid and freer trade, Bolivian comments.....	1067
U.S. aid operations, hearings.....	4755
Lattices (reactor):	
heavy water lattice project, annual report.....	7702
rod-clustered pressure-tube, NDC-Fortran program for unit cell nuclear design calculations.....	16834
Latvian Soviet Socialist Republic:	
Academy of Sciences—	
activities.....	6670
institutes serving agriculture.....	10596
atomic research.....	808
physics, current research.....	6791
science in service of national economy.....	883
scientific activities.....	17899
Lauderdale County, Ala., forest inventory statistics.....	3379
Launch vehicles, see Spacecraft.	
Launchers:	
application of time-optimal control theory to launch vehicle regulation.....	11077
Mark 16, Mark 112, etc., description, operation and maintenance, ordnance pamphlet.....	11195, 12960, 14635
Nike Apache performance handbook.....	9174

	Entry
Launchers—Continued	
smoke-trail vehicle for application to wind-shear measurements up to 80,000 ft., development	20994
Launching facilities:	
aircraft equipment, Federal item identification guides for supply cataloging, supplements	3660
Atlas and Titan intercontinental ballistic missiles administration of construction at selected Air Force bases, GAO review	232
Laundry and laundries:	
design and construction of laundries, engineering manual	12089
detergents for home laundering	18424
fair labor standards act, interpretative bulletin	11378
machinery and operations, comparison of State safety codes with ASA, chart	9038
nursing homes laundry	13015
workers, coverage under Fair labor standards act, extend investigation, hearings	7994
Laura Sarantti, Sister, see Sarantti, Maria N. (Sister Laura).	
Lava, pillowed lavas, intrusive layered pods and pillowed lavas, Unalaska Island, and review of literature	6560
Lava Beds National Monument, general information	19978
Lavin, Fred, comparison of 16 grasses and forbs for seeding chaparral burns	17492
Law:	
Austria, anti-dumping legislation	8416
East European, legal journals, abstracts	696, 756, 857, 959, 980, 1103, 1121, 2474, 2554, 2575, 2660, 2789, 5138, 5246, 5342, 6648, 6730, 6897, 7076, 7128, 8528, 8575, 8672, 8736, 8812, 8819, 8891, 10379, 10477, 10694, 10702, 10808, 10856, 12345, 12389, 12556, 12592, 12768, 14194, 14337, 14381, 15732, 16045, 16075, 16088, 17597, 17847, 17867, 17971, 19373, 19425, 19466, 19635, 20867, 20904.
export fruit acts, regulations established and their application to fruit shippers, etc.	6
how our laws are made	11756
print as House document, reports	7932, 8083
Judge Advocate legal service, Army pamphlets	106, 1801-4, 4453-55, 5912-13, 7670-73, 9656-57, 11535-536, 18237, 14941-942.
law vs. lotteries	9326, 12971
laws for the Nation, citizenship reader	8360-62
procurement legal service, Army pamphlets	110, 1806, 4457, 5917-18, 7679-80, 9659-61, 13239, 14945-946, 16826-8271, 18553.
publications, price list	9331
slip laws (private), 88th Congress	9802-5, 13391-412, 16973-17012, 18770-771, 20395-422.
slip laws (public), 88th Congress	6062, 7821-28, 9806-11, 11708-730, 13412-436, 15142-161, 17013-53, 18772-789, 20423-445.
using cybernetic methods, USSR study	5148



# JANUARY-DECEMBER

	Entry
<b>Law—Continued</b>	
see also Codes of law—Commercial law—Criminal law—International law—Jurisprudence—Military law—Statutes at large—also names of countries and States—also subjects.	
<b>Law enforcement:</b>	
officers, guide to laws enforced by Alcohol and Tobacco Tax Division, IRS	5051
techniques, PACAF basic bibliographies	13212
<b>Law of proportionate development is law of development of relations of production, Communist China</b>	845
<b>Lawns:</b>	
better, establishment, maintenance, renovation, problems, grasses, diseases, how to control them	24
eastern farmer co-ops services	18426
fertilisers, selecting	3379
weeds control with herbicides	9571
Lawrence, Carl B., Calhoun County, S.C., soil survey	18427
Lawrence J. M., aquatic herbicide data	20140
Lawrence, Mass.:	1680
occupational wage survey—departmental edition	16288
document edition	15179
<b>Laws, see Codes of law—Labor laws—Law—also subjects.</b>	
<b>Lawyers:</b>	
assigned by court in criminal cases, compensation—	
hearings	13815, 15322
reports	13762, 20472
available to represent inventors before U.S. Patent Office, list—	20019
photocomposition using magnetic tape storage and computer processing	16480
career in Agriculture Department	1709
fees paid in bankruptcy proceedings, examination by court—	
law	11709
reports	6176, 9064
licensed attorneys' automatic admission to practice before Federal agencies, hearings	17316
registered to practice before Patent Office, list	14640
see also Public defenders.	
<b>Layers, potential layers and rate of lay</b>	11334
Layman's look at water in Alabama	10301
Layout, see Plants (Industrial).	
Layton, Garrison, P., Jr., flight evaluation of 2 unpowered manned paragliders	9188
Lazarus, Barbara T., relief	9852
	13695, 16973
Lazarus, Hillel D., effects of radiation on mammalian eye	18591
Lazorchick, Daniel C., Miners' International Federation, international labor study	5099
Lazzaroni, Frank A., disk-shaped re-entry configuration	14544
<b>Leaching:</b>	
alumina extraction from ferruginous bauxite by double-leach process	18098
bacterial of manganese ores	1241
caustic liquors containing alumina, desilication tests	1239
oxidation, of copper sulfides in acidic pulps	7224
requirement and salt balance in irrigated lands	13192
<b>Lead:</b>	
Deep Creek zinc-lead mine, methods and costs	14500

	Entry
<b>Lead—Continued</b>	
deposits, effect on automotive exhaust catalysts	14500
geology of upper Mississippi Valley zinc-lead district (series)	10261, 17522
<b>Industry, mineral industry survey, monthly</b>	3826
lead-zinc domestic mining industries, conditions—	
hearings	15315
report	15278
mine production, mineral industry survey, monthly	3827
minerals yearbook chapters	1208, 19845
mining stabilisation program, annual report, 1962	7201
recovery from slimes	16335
sponge, battery plate conversion to lead dioxide from pastes made of lower oxides	7369
stabilising mining by small domestic producers, amend act—	
law	15154
reports	7936-37, 7948-49, 11985-986
Tariff Commission report	20190
<b>Lead disilicic fluorica, see Fluorimicas.</b>	
<b>Lead isotopes, evaluating lead-isotope ages, algebraic and graphic methods</b>	5022
<b>Lead oxides, battery plate conversion to lead dioxide from pastes made of lower oxides</b>	7369
<b>Lead sulfide, slime, alkyl-dithiocarbamic acid amine salts as flotation collectors</b>	1232
<b>Lead vanadates, heats and free energy of formation</b>	9126
<b>Leadership:</b>	
Air Force NCO leaders, selection techniques, status, June 30, 1962	4466
books for leaders who work with children and youth	15089
4-H horse program, guide for club leaders	13185
Navy, manual	1370
personnel, preparation in education of mentally retarded children, graduate fellowship program	10071
small business, education	1448
<b>Leafhoppers, see Beet leafhoppers—Evacanthidae—Nirvanidae—Potato leafhopper—Ulopidae.</b>	
<b>Leaflet disseminators, air-ground</b>	7485
<b>Leaflets, see names of departments, etc., issuing leaflets—also subjects.</b>	
<b>Leak, William B., effects on seedbed, overstory, and understory on white ash regeneration</b>	10239
<b>Leak detectors, NRL thermistor-bridge gas leak detector and its sensitivity to various gases, operational performance</b>	3232
<b>Leak-rate testing of NASA Plum Brook reactor containment vessel</b>	14551
<b>Leaphart, Charles D., Armillaria root rot</b>	17472
<b>Learners, see Apprentices.</b>	
<b>Learning:</b>	
acquisition of probabilistic discrimination between subsequent alternative events	9614
augmented feedback and acquisition and transfer of skill	3218
difficult, short-term treatment	16788
effect of visual perception of depth, grouping according to ability, does it make difference?	5857
human factors research, bibliography	8161
	18487



# INDEX 1963

Entry	Entry
Learning—Continued	Lecnar, William B.—Continued
improving environment, local preparation of visual instructional materials	comparison of Air Force aptitude indexes with corresponding talent test composites
post-discrimination gradients	survey of tests used in airman classification
around stimuli with differential rates of occurrence in discrete response task	18496
self-learning systems feature characteristics and 6th feedback loop, USSR study	9624
19677	1648
Leases:	Ledridge, catalog
geothermal steam deposits, issuance of leases, hearing	Lee, D., boundary conditions over tool-metal interface in plastic-working conditions, etc.
Indian long-term leasing act, amend, report	20015
oil and gas, entered into by Navajo Indians, approve, report	5576
real estate program relating to leasing of major facilities under long-term leases, GAO review	8039
2331	Lee, Henry A., spin investigation of model of unswept-wing, twin-engine, observation airplane
U.S. oil and gas lease no. Sacramento 087532-C, reinstate and validate, report	1348
15379	Lee, Mannor, relief
Least squares:	Lee, Robert E., memorial, Custis-Lee Mansion, general information
computing effect of additional observation on previous estimate	Lee Shue Chung, see Lee Suey Jom
fit of an algebraically unspecified form	15231
6505	Lee County, S.C., soil survey report
NAREC program for least square error curve fitting	13059
3230	Lee Experimental Forest, Va., trees and shrubs
Leather, hides, and skins:	10251
hide curing methods, economic evaluation	9231
leathers, Federal item identification guides for supply cataloging, supplements	9671
personal leather goods, current industrial reports	Leftist experts answer 8 questions on 22d CPSU congress
rapid sole leather tannage using domestic materials	1097
tanning and finishing, industry wage survey	9378
14478	Legal aspects of selective service
see also names of articles manufactured from leather	Legal problems of planning in metropolitan areas
Leave of absence:	3292
disability days due to injury, U.S. health statistics, July 1959-June 1961	Legal series, Farmer Cooperative Service
disability days, U.S., July 1961-June 1962	4220
20112	Legal services, see Law
Federal agencies, principles and procedures, GAO guidance manual	Legge, Frederick M., III, cattle exporters guide
585	1679
Government officials and employees, FPM supp.	Legislation:
sabbatical leave in American higher education, origin, etc.	comprehensive, clear and positive (address)
sick, supervisor development program, basic course	4890
terminal, former civilian employees and ex-servicemen of Labor Dept., unemployment compensation policies, GAO review	major legislative actions, 88th Congress
10267	8813, 11733, 13441, 15105, 17058, 18792
Leaves, leaf fall, northern hardwood forest, interrelationship with humus depth and soil frost	Public Works Committee, Senate, activities, summary, 87th Congress
6490	2106
Lebanon:	see also Labor laws—Law—also subjects
educational data	Legislative appropriations, see Appropriations
establishing business	Legislative bodies, State legislatures, apportionment
United States foreign aid program, report of study	4326
19055	Legislative budget, see Budget of United States
Le Barron, Russell K., simple planting and other reforestation experiments	Legislative history of Welfare and pension plans disclosure act of 1958, as amended by Public Law 87-420 of 1962
6496	5723
Leech, Marie M., hospital central services, literature	Legislative jurisdiction, see Jurisdiction
10508	Legumes, grass-legume mixtures, effects of phosphorus and potassium fertilizers on yield, etc
Leelanché cells, see Electric batteries	16712
Lectures, see Addresses, lectures, etc.	see also Crownvetch
Lecnar, William B.:	Lehman Caves National Monument, general information
aptitude data on Air Force enlisted accessions	16435
65	Lei Feng, Chinese Communist hero, publicity campaign, pictorial, report
	16071
	Leik, Jesse, Jr., relief
	17092
	Leik, Francis H., relief
	18821
	Leiss, Abraham, pressure distribution induced on flat plate at free-stream Mach number of 1.39 by rockets exhausting upstream and downstream
	1300
	Leitz, F. J.:
	sodium-cooled reactors program, fast ceramic reactor development, reports
	7697, 16839, 16844
	summary report, July 1959-Sept. 1961
	7691
	Lemhi Pass, geology and thorium-bearing deposits of area, Idaho-Montana
	6548

# JANUARY-DECEMBER

Entry	Entry
	Lemmon, Gene C., bibliography of AFFTC technical publications and presentations, 1952-62. 5863
18496	Lemon, Edgar R., energy budget at earth's surface. 16756-757
9624	Lemons:
1648	biphenyl control of spoilage. 1704
	marketing costs and grower's re- turns, impact of technological change. 1706
20015	Lenchek, A. M., anomalous compo- nent of low-energy geomag- netically trapped protons. 1706
5578	Lend-lease operations:
8039	report—
1348	departmental edition. 16575
	document edition. 15182
5231	Lenders hat book, guaranty or insur- ance of loans to veterans of World War II and Korean con- flict change. 1584
3059	Lending operations, see Loans.
0251	Leogyel, L. L., vortex type, magneto- hydrodynamic induction gen- erator. 18161
0231	Lenhard, Robert W., Jr.: error analysis of modified humidity- temperature measuring set, AN/TMQ-11. 18490
0671	mesospheric winds from 25 succe- ssive hourly soundings. 18451
097	Leala, Vladimir I.: principles for cadre training, USSR study. 6650
378	rewards, prizes, etc., works sub- mitted in competition, 1963. 5153
292	theories, applied to revolutionary struggle for power, Vietnamese study. 12292
220	Lenin prize: awarded to Soviet mathematicians, awards, 1963, science and engineer- ing. 6601
379	works accepted in competition, 1963. 8963
090	Leningrad, Russian SFSR, sightsee- ing tours in region, transla- tion. 957
33.	Leninism, see Communism.
92	Lens, Sidney, testimony, hearing. 19062
06	Lent, Gary L., basic data on economy of Ghana. 2391
	Lentils, dry, foreign agriculture circulans.
3	Leonard, Raymond E., precipitation measurement on forested exper- imental watersheds. 20699
	Lepidoptera, larvae frequently inter- cepted at quarantine, keys for identification. 13155
	see also Moths.
	Lesage, M. A.: deep hypothermia, survival, etc., to circulatory arrest. 13205
	hypothermia induced, etc., with pump oxygenator. 11497
	Lesikar, Raymond V., education for leadership in small business. 1448
	Lesions:
	septal and hypothalamic, effects on shivering in cats. 11494
	tumorous, of hemopoietic system, classification, USSR study. 17656
	Leslie, Edward A., living conditions in United Kingdom. 2432
	Lesser Sunda Islands, sailing direc- tions. 3206
	Lessing, Henry C., stability deriva- tives of airplane model with unswept wing and high hori- zontal tail. 5538
	Letko, William, loads induced on flat plate at Mach number of 4.5

Entry	Entry
	Letko, William—Continued with sonic or supersonic jet ex- hausting normal to surface. 14582
	Leucocytes:
	human and monkey, in culture, comparative study. 76
	peripheral blood, technic for pre- paring chromosomes. 20310
	transfusion of dry leucocytic mass in leucopenic conditions, clinical effectiveness, USSR study. 5115
	Leucopenia, transfusion of dry leuco- cytic mass, clinical effective- ness, USSR study. 5115
	Leuk, for most subjects beginning with this combining form, see Leuc.
	Leukemia, etiology of leucoses, role of viruses, USSR study. 8871, 15803
	Leukosis, see Leukemia.
	Leveille, Gilbert A.: fatty acid composition of plasma and liver lipid components as influenced by dietary protein and cholesterol. 1811
	immunochemical and polyanion pre- cipitation method of beta-lipo- proteins. 11547
	influence of dietary factors on plasma cholesterol of growing mice. 13245
	influence of orally administered antibiotics on growth and plasma lipid levels of growing chicks. 11548
	plasma and liver lipids, fecal bile acid and sterol excretion of rats fed pectin and saponin. 11549
	Lever, R. C., metallic fuel element ma- terials, comprehensive techni- cal report, General Electric direct-air-cycle aircraft nu- clear propulsion program. 121
	Leverett, Sidney D., Jr., decompres- sion sickness studies, circula- tory and respiratory changes in anesthetized dogs. 9630
	Levesque, Gilbert, technique for sex- ing fully developed embryos and early-instar larvae of gypsy moth. 10233
	Levine, E. D., aluminum-lithium phase diagram. 1834
	Lervine, Jack, rocket vehicle used in RAM A1 flight tests. 7268
	Levine, Milton, American science manpower, 1960, report of na- tional register of scientific and technical personnel. 3191
	Levy, S.: analysis of various types of 2-phase annular flow, etc. 18572
	prediction of critical heat flux in forced convection flow. 14976
	Lewis, Albert J., testimony, additional copies, report. 11857
	Lewis, Gertrude M.: central office services to elemen- tary schools, organization, etc., evaluating elementary schools, se- lected references. 17572
	Lewis, John P., nomination, hear- ing. 10002
	Lewis, Lanora G., talent and tomor- row's teachers, honors ap- proach. 8179
	Lewis, Richard E., weld heat-affected zones in titanium alloy. 9318
	Lewis, Richard W.: nitrogen. 18086
	phosphate rock. 18089
	potash. 16328
	spectrochemical analysis of high- purity beryllium. 1246

# INDEX 1963

Entry	Entry
Lewis, Robert, air pollution and New Orleans asthma-----	1400
Lewis, William, effect of closed-end branch on sinusoidally perturbed flow of liquid in line-----	18148
Lewis, William B., work force adjustments to technological change-----	6353
Lewis and Clark County, Mont., geology of Basin quadrangle-----	20729
Lewis and Clark Expedition, trail from St. Louis, Mo., to Pacific Northwest, encourage preservation, reports-----	9906, 17265
Lexington, Ky., Blue Grass Field, weather observations, hourly, summary, decennial census-----	21162
Lexington Park Volunteer Fire Department, Inc., land conveyance by quitclaim deed-----	18889
Leybold, Herbert A., predicting static strength of stiffened sheet containing sharp central notch-----	16407
Li-shih yen-chiu (periodical): translations on Genghis Khan-----	8641
Liability (law), <i>see</i> Claims.	
Liability insurance, farmers who have income-producing recreational facilities-----	15418
Liammari, J. J., international coal trade-----	3796
Liang-Shan, Szechwan Province, China, I Nationality Autonomous Chou-----	781
Liao-ning Province, China, decade of accomplishments-----	2979
Libel and slander, proposed Federal group libel legislation, staff report-----	8003
Liberal arts— in revolutionary world-----	10073
language of free men-----	18607
Liberty: Africa's unfinished struggle for freedom, real issues-----	7432
America's destiny in building of world community (address)-----	11299
freedom, free world responsibility (address)-----	9404
heritage of freedom, origins, etc.—	7659
weight of freedom (remarks)-----	2279
Librarians: and title 3 of national defense education act of 1958-----	2159
educational needs for school library administration, etc., conference proceedings-----	19117
employment with Air Force-----	9609
examination announcement, Veterans Administration installations-----	1938
Libraries: basic reference sources for business, bibliography-----	3325
colleges and universities— analytic statistics, 1959-60-----	4816
institutional statistics, 1961-62-----	12066
depository, law governing-----	6209
elementary school, bibliography-----	4814
key educational media, personnel in library systems, directories-----	17379
library research in progress-----	8175-76, 12065, 20638
library services act— allotments to States-----	19093
amend, report-----	20587
medical, outside U.S. and Canada, directory-----	12913
new serial titles— alphabetical arrangement-----	3962
classed subject arrangement-----	3961
3d series, 1962 cumulation-----	14487
Libraries—Continued public— construction— hearings-----	9030
message from the President-----	4720
library services act— hearings-----	13646
report-----	15273
rural areas, State plans under Library services act, progress report-----	19119
publications and articles-----	17391
school library as materials center, conference proceedings-----	19117
school, supervision in State and local school systems-----	4823
service for rural people-----	1693
services-----	2160
<i>see also</i> names of libraries or places where located.	
Library accessions: Adjutant General's Office, Army Library-----	4322-23
Community Health Services-----	11250
foreign statistical publications-----	3726
India, American Libraries Book Procurement Center, New Delhi-----	7182
Interior Department-----	3868
Labor Department-----	4183
Middle East, American Libraries Book Procurement Center, Cairo-----	9089
National Archives-----	14595
Pakistan, American Libraries Book Procurement Centers, Karachi and Dacca-----	7186
Reclamation Bureau, list-----	16550
Russian, Library of Congress-----	3913
Library bulletin, Quartermaster Food and Container Institute for Armed Forces-----	9368
Library extension, <i>see</i> Libraries.	
Library lists, National Agricultural Library-----	1326, 5617, 11092-93, 12890, 14593-594, 16414, 18182
Library of Congress: accessions— India, American Libraries Book Procurement Center, New Delhi-----	7182
Middle East, American Libraries Book Procurement Center, Cairo-----	9089
Pakistan, American Libraries Book Procurement Centers, Karachi and Dacca-----	7186
Russian index-----	3913
acquisitions, quarterly journal-----	4126
appropriations, 1964, legislative— hearings-----	13791
reports-----	11830, 13750
budget, 1964, amendments-----	9838
calendar of events-----	7181
cataloging service bulletins-----	18054-56
catalogs— books, subjects-----	3864, 19809
dictionary, subject headings used-----	4214
motion pictures and filmstrips-----	3865
music and phonorecords-----	18057
National Exhibition of Prints-----	10927
national union catalog-----	3941
classification— additions and changes-----	3820
class A, general works, polygraphy-----	9086
class M, music and books on music-----	10928
class Q, science-----	9087
exhibits, monthly list-----	3631
geographical atlases, list-----	16302
information bulletin-----	3787
information for readers-----	5463
limited cataloging service, discontinuance-----	18056

Entry	Entry
Library of Congress—Continued	Liens—Continued
National Referral Center for Science and Technology, clearing-house for information resources of scientific and technical community.....	motor vehicles and trailers, alphabetical file by D.C. Recorder of Deeds, eliminate—
PL 480 newsletter.....	law.....
President's papers index series.....	reports.....
press releases.....	17019
Public law 480 project, accessions list—	13625, 13733
India.....	Life:
Middle East.....	anabiosis and general problem of life, USSR study.....
Pakistan.....	biology, science of life, USSR study.....
publications, price list.....	essence, philosophic problems, USSR study.....
report, 1962—	in meteorite, USSR study.....
departmental edition.....	working life for men, 1900-60.....
document edition.....	working life for men, 1960.....
Soviet Union newspapers.....	see also Life on other planets—longevity.
Library science:	Life Insurance:
classing curriculum guides, etc., dissertations, 1925-60, annotated bibliography of doctoral studies.....	act of D.C.—
nuclear science literature management.....	amend relative to capital stock insurance companies, report.....
Libya:	amend relative to false statements—
boundary studies—	law.....
Algeria.....	reports.....
Chad.....	commercial, Army regulations relating to solicitation on installations.....
Niger.....	Federal employees group act of 1954, amend to extend insurance coverage to temporary D. C. Teachers—
Sudan.....	hearing.....
establishing business.....	report.....
exports and imports, licensing and exchange controls.....	Federal employees group insurance, FPM manual supplement.....
living conditions.....	individual investments in reserves, 1962.....
market for U.S. products.....	national service—
United Kingdom, ground water exploration in Al Marj area, Cyrenaica.....	dividend schedules.....
United States foreign aid program, report of study.....	new modified life plan for NSLI policyholders, reports.....
Lice, infestation.....	reserves, investments of individuals.....
Licenses:	Life Insurance companies:
AEC licensing guide.....	District of Columbia—
dental hygienists in D.C., waive theoretical examination, report.....	act rel. annual statements, amend, report.....
export, approved and reexportations authorized, list.....	amend act relative to capital stock, report.....
firearms and ammunition in interstate traffic, internal revenue regulations.....	regulations rel. loaning money on securities, exempt from report.....
licensing controls—	farm-mortgage lending experience.....
Brazil.....	nonfarm mortgage investments, 1962.....
Ethiopia.....	Life on other planets:
Federation of Rhodesia and Nyasaland.....	astrobiology, history, nature, and theory.....
Great Britain.....	data from recent observations, USSR study.....
Indonesia.....	exobiology, new field of scientific research, USSR study.....
Japan.....	probabilities, etc., USSR study.....
Libya.....	search for extraterrestrial life.....
Philippines.....	Life sciences, new technologies and their promise.....
Republic of South Africa.....	Life tables, vital statistics of U.S., 1960.....
Senegal.....	Lifetime and recent migration.....
Venezuela.....	Lift (aircraft):
Yugoslavia.....	application of numerical technique to lifting-surface theory for calculation of unsteady aerodynamic forces due to continuous sinusoidal gusts on wing planforms.....
see also classes of persons to whom, or subjects for which, licenses are issued.	approach and landing investigation at lift-drag ratios of 3 to 4 utilizing delta-wing interceptor airplane.....
Lichtenstein, Stanley, officer jobs, feasibility of identifying predictors of success from personnel records, etc.....	
Liebe Freunde! Gesundheitsregeln für Amerikareisende.....	
Lien-shan Chuang and Yao Nationalities Autonomous County, establishment.....	
Liens:	
bankrupt estate priorities, report.....	

# INDEX 1963

	Entry
<b>Lift (aircraft)—Continued</b>	
circular plan form aircraft with peripheral jet, windtunnel tests	7245
general time-dependent lift and downwash distributions on finite wings in subsonic flow, integral equation	3141
induced lift and minimum induced drag of nonplanar lifting systems	11090, 18168
lift and drag of swept-wing fighter airplane at transonic and supersonic speeds	10983
reentry configurations, lifting, aerodynamic and control studies	11004
swept-wing heavy-bomber configuration with large store (nacelle), Mach number, 1.61, store interference, origin and distribution	12843
<b>Ligaments, surgical treatment, USSR study</b>	15731
<b>Light:</b>	
activation reaction of EEG, USSR study	20814
candela as unit of luminous intensity, establish—	
hearing	18958
reports	13754, 18903
chemical light meter, description and evaluation in forest research	10221
effect of light on plants, literature review, 1950	7540
luminescence methods in cytology, USSR study	19659
self-absorption, determining transition probabilities and level population densities	20303
spectral luminescence of tissues of otorhinolaryngo-logical organs, USSR study	12375
ultraviolet photodetector, fast solid-state	20299
ultraviolet, Schumann-Runge absorption continuum of oxygen, effect of high temperature	1321
vacuum ultraviolet light sources	19896-897
<b>Light amplifiers, see Lasers.</b>	
<b>Light filters, display sharing through color filtering</b>	58
<b>Light horses</b>	24
<b>Light lists, see Lights and lighting.</b>	
<b>Light modulators, two-plate crystal</b>	18169
<b>Lighting, see Lights and lighting.</b>	
<b>Lighting equipment, see Lights and lighting.</b>	
<b>Lightning:</b>	
aircraft protection, optimum number, etc., of static dischargers	20297
negative spark, development and comparison, new USSR material	2545
Project Skyfire progress report, 1958-60	17473
protection for farms	7563
protection systems, emergency construction, engineering manual	6373
<b>Lights and lighting:</b>	
aircraft, continuation of flight with inoperative anti-collision lights, civil air regulations amendment	10109
airport equipment, approved list	19160
airports, approach lighting systems, maintenance, FAA handbook	477
airways lighting, astronomical time switches and photoelectric devices, maintenance	12095

	Entry
<b>Lights and lighting—Continued</b>	
ANNA-1 satellite optical beacon, evolution	9617
barges in special vessel anchorage areas, amend rules—	
hearing	13798
law	17014
reports	11829, 11963
<b>Coast Guard lists—</b>	
Atlantic and Gulf Coasts	4641
Atlantic Coast, local	4640
Great Lakes	6041
Mississippi River system	6042
Pacific Coast and Pacific Islands	4642
experimental exterior lighting systems approved for use on aircraft	475
fixtures, Federal item identification guides for supply cataloging, supplements	3656
<b>Hydrographic Office, lists</b>	1364, 3208-9, 19990
<b>Lighting for hospital patient rooms, report of joint project</b>	1409
<b>maintenance of lights in Red Sea, international agreement</b>	11924
<b>Naval Oceanographic Office, lists</b>	5651, 7353, 9258-59, 11140, 19989, 21052-53
<b>nursing home lighting</b>	13011
<b>standards for lighting obstructions to air navigation</b>	484
<i>see also</i> Electric lamps.	
<b>Lignite:</b>	
hydrocracking low-temperature tar from North Dakota	10966
hydrogasification	3083
technology and use symposium, proceedings, Apr. 1961	12825
<i>see also</i> Coal.	
<b>Lim, T. P. K., effect of induced hypoxia on thermoregulation and cardiopulmonary function</b>	11495
<b>Lime:</b>	
frost heave characteristics of slag-fly ash-lime base-course mixture	12086
mineral industry survey, monthly	3867
minerals yearbook chapter	20951
quicklime as stabilizer of soils, investigations	15459-460
<b>Lime soda sintering:</b>	
alumina recovery from anorthosite	18102
iron characteristics in process	1230
<b>Limestone:</b>	
floatation, effect of ions common to natural water	9121
Pennsylvanian in central Texas, petrography and environmental analysis	19309
petrography of basalt beneath, Eniwetok Atoll	19308
quarries, Iowa, vibrations from delayed blasting	16340
<b>Limitation of debates, see Cloture.</b>	
<b>Limnology:</b>	
development in China, Communist China study	8682
organic analyses by quantitative dichromate oxidation	2297
White Oak Creek and Lake, ecological survey	11566
<b>Linn, Lindsay J., investigation of visual boundary for immediate perception of vertical rate of descent</b>	5591
<b>Lincoln, Abraham, first inauguration, 100th anniversary, ceremonies and re-enactment, on east front of Capitol of U.S., Mar. 4, 1961</b>	1984



	Entry		Entry
Lincoln County, Ga., Graves Mountain kyanite-quartzite rock, flotation	16338	Lingo, Daniel T., Jr., accident	15659
Lincoln County, Miss., soil survey report	18318	Linguistics, <i>see</i> Language and languages	
Lincoln County, Nev.: land conveyance—		Linings for irrigation canals	16547
law	11727	Linnebohm, V. J., range-energy relations for protons and electrons in Al, Si, and SiO <sub>2</sub>	12952
reports	8070, 9878	Linstrom, Harold R., materials used in 1961 automobile interior, etc	3369
Lincoln Museum and the House Where Lincoln Died, general information	3186, 21043	Linters, <i>see</i> Cotton	
Lind, George, statistics of land-grant colleges and universities, year ended June 30, 1960	387	Linth, Vernon B., relief	17091
Lindahl, Martin L., air transportation in New Hampshire	1453	Lipid peroxides, <i>see</i> Peroxides	
Lindane, sheep dipping vats, failure to maintain required concentration	5801	Lipids:	
Lidenfeld, Frank, teacher turnover in public elementary and secondary schools, 1959-60	15450	constituents of whole and parotid saliva	81
Lindgard, Elmer W., Sir Henry S. Wellcome papers	7305	ionizing radiation effects on lipids of fish—	
Lindow, Herbert A., establishing business in Colombia	17555	annual report	18595
Lindquist, Clarence B.: degrees in biological and physical sciences, mathematics, and engineering, 1949-60	17365	final summary	18598
entering levels and college courses in freshman mathematics	17371	plasma and liver, of rats, effect of dietary pectin and saponin	11549
honors programs for superior undergraduate mathematics students	19102	plasma, levels of growing chicks, influence of orally administered antibiotics	11548
programs of advanced standing in mathematics	19110	quantitative determination in human dentin	7629
Lindsay, Felix H. L., faculty and other professional staff in institution of higher education	17373	serum concentrations—	
Lindsay, Rao F.: educational data, Iraq	6328	changes with age in young men	9628
educational data, Turkey	8169	Military Academy graduates, 1952-60	13217
Lindsay, Renee, <i>see</i> Whang, Shin Sook (Renee)		serum, extraction apparatus for determination	4420
Lindstrom, R. E., hydrogen as retaining ion for rare-earth separation by ion exchange with EDTA and DCTA	3089	Lipoproteins:	
Line widths, <i>see</i> Linewidths		beta, immunochemical and polyanion precipitation method for quantitative analysis	11547
Linear equations, <i>see</i> Equations		serum concentrations, Military Academy graduates, 1952-60	13217
Linear programming:		Lipper, Harold W., helium	12823
bibliography	18627	Lipschutz, Michael E., cosmic-ray induced stable and radioactive nuclides in meteorites	14570
in assortment planning, application, USSR study	5287	Lipson, Harry A., case studies of small retail stores	1456
in study of rural electrical network, USSR	6812	Lipton, Werner J., effects of precooling on market quality of globe artichokes	20286
mathematical programming models for selection of diets to minimize weighted intake	20093	Liquid fluorine, <i>see</i> Fluorine	
use in establishing labor norms, USSR study	8715	Liquid fuels, Federal test method standard	20682
Linear systems:		Liquid hydrogen, <i>see</i> Hydrogen	
autonomous, modes of control	1315	Liquid level indicators, carbon resistors for cryogenic liquid level measurement	21030
optimal control with time lags, USSR study	14224	Liquid metal fuel reactors, <i>see</i> Reactors (atomic)	
recombination of dislocations in germanium, USSR study	5234	Liquid metals, <i>see</i> Metals	
Linearization of adsorption data	1229	Liquid oxygen, <i>see</i> Oxygen	
Lineberry, Edgar C., Jr., automatic system for control of terminal phase of satellite rendezvous	1823	Liquids:	
Lines, <i>see</i> Electric lines		collisions of liquid drops with liquids	11516
Linewidths, tables to determine ferromagnetic resonance linewidth of non-metallic magnetic materials	9215	coupled dynamic responses of partially filled tank undergoing free and forced planar oscillations	16408
Lingafelter, J. W., erosion flow testing of defected stainless steel clad compacted UO <sub>2</sub> powder fuel	16836	isotopic analysis with 6-inch radius mass spectrometer	9682
Lingle, Walter L., Jr., address, May 1, 1963	10970	sinusoidally perturbed flow in line effect of closed-end side branch	18148
		sloshing in toroidal tanks, frequencies and forces resulting	12858
		surface tension, measurement, USSR study	5326
		turbulent mass transfer in liquid streams	11561
		<i>see also</i> Fluids	
		Liquors:	
		distilled, industry, outlook for 1963 and review of 1962	5969

# INDEX 1963

Entry	Entry
Liquors—Continued	Livestock:
District of Columbia, alcohol beverage control act—	air pollution effects..... 1418
amend to prohibit false advertising—	animal industry, publications, price list..... 5681
hearings..... 15306	animal units fed annually, 1909-61, statistics..... 4376
report..... 20489	auction markets, regulation, hearings..... 9918
revise—	brucellosis eradication—
hearings..... 15306	recommended uniform methods and rules..... 4342
report..... 20489	State-Federal cooperative program, statistical tables, 1963... 20265
Intoxicating, code of Federal regulations..... 4917	Cuban development of productive raising..... 724
<i>see also</i> Malt liquors.	dealers, recordkeeping under packers and stockyards act..... 16754
Lisi, Alfred G., carcinogenesis abstracts..... 12983	exposed to radiation—
Lists, <i>see</i> subjects of lists.	care for..... 10131, 10133
Literacy, <i>see</i> Illiteracy.	protection..... 10132
Literature:	farm production, etc., 1961-62..... 11336
atomic energy, what's available... 9686	fed by meat packers, 1957-61... 9532
choking 2-phase flow, summary... 18191	foreign agriculture circulars... 3720
corrosion of reactor materials, collection..... 1818	foreign crops and markets—
Eastern Europe, scientific and technical, guide..... 5646	periodical..... 2305, 3721
USSR, in post-Stalin era..... 10366	world summaries, monthly... 3722
Lithium:	foreign trade prospects..... 4978
aluminum-lithium phase diagram... 1834	health requirements and regulations governing interstate and international movement..... 18405
minerals yearbook chapter..... 12832	Industry—
Lithium fluoride, fracture whiskers, strength dependent on size, USSR study..... 6807	Argentina..... 15543
Lithium hydroxide:	France..... 6477
concentrated LiOH effects on steel corrosion in steam generating systems, laboratory studies... 3231	Uruguay..... 15544
monohydrate, AEC procurement contracts, GAO review..... 8322	West Germany..... 6478
Lithographers, Navy training course... 18222	insecticide recommendations for 1963..... 7557
Lithology, <i>see</i> Rocks.	inspection at public stockyards, manual..... 1642
Lithuania:	inventory, 1963..... 5747
atheists converting Catholics, methods used..... 17679	livestock and meat situation... 3873
bourgeoisie, reflections concerning shattered illusions, USSR study..... 17865	market news, weekly summary and statistics..... 3874
Litigation, <i>see</i> Actions at law.	packers and stockyards act, as it applies to—
Litters, <i>see</i> Stretchers.	auction markets..... 13140
Little Lost River, hydrology of basin, reconnaissance..... 10297	dealers..... 13141
Little Neck Bay:	producers..... 13142
engineer report—	producer contributions for market development—
departmental edition..... 425	hearing..... 11871
document edition..... 247	law..... 13435
Little Rock, Ark.:	report..... 13717
Adams Field, weather observations, hourly, summary, decennial census of climate..... 14783	producer program, report..... 9897
occupational wage survey—	production, labor used, estimates by States, 1959..... 18444
departmental edition..... 1176	production units, 1910-61..... 5843
document edition..... 281	purchases by packers, 1960-61... 9532
Littoral studies near San Francisco using tracer techniques..... 6359	ranches, western, costs and returns, 1962..... 15412
Liu Shao-ch'i, Hanoi speech..... 12475	receipts and disposition at public markets, 1961..... 4336
Liu, Wai Chan Cheng, relief..... 17077	regulatory establishments, stations, and officials..... 4313
Livadiya Sanatorium, in post-war time, USSR study..... 10772	reports, contents and release dates, 1963..... 5746
Live stock, <i>see</i> Livestock.	slaughter, meat and lard production, etc., 1962..... 11335
Liver:	statistics, 1962..... 14893
acute carbon tetrachloride hepatotoxicity, current concepts..... 7628	survival after fallout from nuclear attack..... 4369
constituents in rats fed pemmican meals..... 11499	trucking, safety-checking to reduce loss, etc..... 8206
di- and triphosphopyridine nucleotide, effects of cold acclimatization..... 11498	tuberculosis eradication, State-Federal cooperative program, statistical tables, 1962..... 15
enzymes associated with amino acid metabolism, effect of protein intake and cold exposure..... 11502	USSR production..... 8542
experimental resection, evaluation of use of certain plastics..... 2496	Virginia crops and livestock... 4279
lipid components, influence of dietary protein and cholesterol... 1811	weighing, protective activities of Packers and Stockyards Division, AMS..... 1614
	western range and livestock report, monthly..... 4303

	Entry
Livestock—Continued	
Western States, plants poisonous to, description, etc.	14856
world summaries of statistics, release dates, announcement.	2308
see also Food for livestock—Slaughtering.	
Livestock Sales Association, Equity Cooperative, see Equity Cooperative Livestock Sales Association.	
Living arrangements of older persons, 1950 and 1961.	9506
Living conditions, see Cost and standard of living.	
Livingston, Robert B., narcotic drug, addiction problems.	21033
Livingstone, Daniel A., chemical composition of rivers and lakes.	6558
Lizards, populations, influence of cratering device.	11575
Lloyd, Emily E.: economic developments in Hong Kong, 1962.	8385
living conditions in Hong Kong.	12254
preparing shipments to Hong Kong.	8392
Load (mechanics):	
aerodynamic—	
Scout 3-stage vehicle.	14580
thin-trapezoidal-wing-bond combination, loading characteristics including effects of aeroelasticity.	16362
wings, delta and trapezoidal, pressure data and characteristics at Mach numbers of 1.61 and 2.01, errata.	3127
assumptions for buildings, engineering and design manual.	4864
biaxial, flutter of flat rectangular orthotropic panels and arbitrary flow direction.	19924
buffet bending, on launch vehicles predicted from tests on aeroelastic model.	20998
buffet pressures on models of large manned launch vehicle configurations.	12851
buffet tests of attack-airplane model.	5534
buffeting, hammerhead launch vehicles, dynamic response.	19934
fluctuating, plastic compression—high and low loads, effects on variable-amplitude fatigue tests.	20015
Induced on flat plate at Mach number of 4.5 with sonic or supersonic jet exhausting normal to surface.	3147
inelastic design of load carrying members.	14582
lake ice sheets, test data.	9637
prestressed rigid pavements for airfields, single-wheel loadings on pre-tensioned and post-tensioned slabs.	19137
pure bending moment cause of buckling of ring-stiffened cylinder.	13880
statistical methods in nonlinear theory of elastic shells.	1305
taudem-rotor configurations, air loads measurements.	1319
UH-1A helicopter, second harmonic featuring device.	19931
variable-amplitude loadings effects on fatigue crack propagation patterns.	16632
wind loads on launch vehicles, dynamic response of rising and falling balloon wind sensors.	16380
wing and flap loads of large scale V/STOL model, wind tunnel investigation.	20981
	11029

	Entry
Load (mechanics)—Continued	
wings, due to deflected inboard ailerons on sweptback wing at transonic speeds.	3108
X-15 airplane landing-gear, aerodynamic and control-system contributions.	19940
Loaded shot shells, recorded voluntary recommendation of trade.	9708
Loaders (mechanical): Soviet price list.	15804
Loading, see Load (mechanics)—Unloading and lading.	
Loan associations, see Federal savings and loan associations.	
Loans:	
additional assistance by HHFA for mass urban transportation systems in metropolitan areas, summary.	8095
associations for shifts in land use.	470
bank-SBA participation loan plans, guide.	7425
commercial and industrial, changes, weekly report.	3507
construction of college academic facilities, reports.	11798, 20492
conventional loans, largest insured savings and loan associations mortgage interest rates, summary.	3932
conventional loans made in excess of 80 percent of property appraisal by Federal savings and loan associations.	3553
emergency, to—	
Florida nurserymen.	6384
Florida vegetable growers.	6385
family farmers for recreational enterprises.	471
Farmers Home Administration, in brief.	5839
Federal reserve member bank loans.	3893
Federal, to D.C., authorization, hearings.	12014
FHA financing for home purchases and home improvements, guide.	4894
FHA's new home improvement programs.	2261
financial aid for students in environmental science and engineering.	18284
home mortgage debt and financing activity, 1962, estimates.	8229
home owners acts, compilation.	214
housing—	
for elderly—	
Federal law.	5043
insured, for senior citizens in rural areas.	6386
law.	20439
reports.	17149, 19024
senior citizens, design guides.	6058
senior citizens program, fact sheet.	9793
insurable, digests.	4892, 17430
land acquisition and development.	3554
lenders handbook, VA pamphlet, change.	1584
national defense student loan program—	
distribution of Federal funds, 1959-64.	19106
list of participating institutions, 1962-63.	10075
list of participating institutions, 1963-64.	17381
NDEA and higher education (periodical).	3954
operating, for better farming, etc.	5836
property improvement, title 1 insured loans, FHA fact sheet.	8233

# INDEX 1963

Entry	Entry
Loans—Continued	Locker plants, <i>see</i> Cold storage.
public facility, etc., Federal laws—	Lockhart, L. B. Jr.: atmospheric radioactivity, Wash- ington, D.C. 11153
Rural Electrification Administration—	fission product radioactivity in air along 80th meridian (west) during 1961 16461
lending agency of USDA—	intercalibration of some systems employed in monitoring fission products in atmosphere— 11181
lending program, statistical re- port, 1961 5711	Lockheed Aircraft Corp.: California Company, wage chro- nology 1937-61 1161
program, statistical report, 1961 7421	Missile and Space Division, addi- tional costs from procurement of test equipment as special tooling, GAO report— 15590
rural groups, for improvements, general information 6387	prices awarded The Brush Beryl- lum Co. for Polaris missile parts, GAO examination— 10259
savings and home financing—	Lockport, N.Y., dolomite redescr- ption of 3 species of corals— 6555
chart book 15486	Lockwood, David L., space-charge- flow theory and electrode de- sign for electrostatic rocket engines 1288
short-term business, bank rates— 19203	Locomotive Inspection Bureau, report 1962 2444
Small Business Administration—	Locomotives, Bulgarian railroads, new electric locomotives— 15990
credit requirements, policies, etc., development loan program to help your community, prescription for progress 5717	Locoweed, livestock poisoning in Western States, reducing losses 14856
limited loan participation plan for retail, etc., other businesses 20126	Lodge, George C., address, May 1960 (French language)— 5429
local development companies project, how communities have benefited 11267	Lodgepole pine, <i>see</i> Pine.
local development loans, new life for Smalltown 16559	Loeltz, Omar J., ground-water condi- tions in vicinity of Lake Mead Base, Las Vegas Valley, Nev— 19328
participation loans, handbook— 21104	Loess: deep hills, Missouri, sealing farm ponds 14833
principal lending programs key features 9382	middle region of Yellow River, water and soil conservation, Communist China handbook— 14212
to State and local development companies 11269	Loevinger, Lee: address, Aug. 26, 1963— 17428
small business, increase amount available, hearings— 12007	nomination, hearing— 12013
urban mass transportation—	Log cabins, protection from insects in Eastern United States— 1692
additional assistance—	Logan, William B.: handicrafts and home businesses— 11272, 21105
hearings— 6290, 7990, 8099	training retail salespeople— 14689
reports— 7964, 8049-50	Logarithms: amplitude characteristics for calcu- lating entropy of output pro- cesses of automatic control sys- tems, USSR study— 12332
Federal aids available, fact sheet 2364	plotting positions for logarithmic- normal frequency studies— 18397
veterans—	Logging, <i>see</i> Lumbering.
guaranteed and direct—	Logging roads, <i>see</i> Roads and high- ways.
properties acquired by VA up- on default, GAO report on excessive costs 17507	Logistics, <i>see</i> Military art and sci- ence—Naval art and science.
walver of indebtedness to U.S. to U.S. in certain cases arising out of default—	Logs: hardwood—
hearing— 8128	grading defects— 14852
law— 18788	grading guide— 10211
reports— 6147, 11959	hauling costs, effect of road de- sign, logging road handbook, addenda 4347
guaranty, etc., extend to post- Korean veterans—	plant quarantine import require- ments of foreign countries— 1653
hearings— 12096	ponderosa and sugar pine—
report— 13761	grading defects, guide— 15553
home-buying guide— 16641	grading saw logs in trees, im- proved system— 15558
<i>see also</i> Banks and banking—Federal savings and loan associa- tions—Mortgage insurance— Mortgages—Savings and loan associations.	production, 1961, Washington— 17503
Lobectomy, pulmonary carcinoma, USSR study— 16118	production, 1962, Oregon— 17504
Loblolly pine, <i>see</i> Pine.	southern pine—
Lobsters:	grading features— 8304
Maine population biological fluctu- ations check, use of environ- mental and economic factors— 4944	overrun data— 6523
spiny, South Africa fisheries— 8271	
Local board memorandums— 3875	
Local public agency letters— 3877	
Local transit:	
National Capital Region program, develop, hearings— 17167	
operating employees, union wages and hours— 7169	
Localism, nature and causes, Yugo- slav study— 2576	
Location identifiers:	
airport, etc.—	
handbook— 14928	
manual, revisions— 3878	
Lock boxes, Post Office Department lock boxes, procurement, GAO review— 2329	
Lockard, C. R., grade defects in hardwood timber and logs— 14852	

# JANUARY-DECEMBER

	Entry
Lohr, Inez D., selected films on child life	1927
Lohrey, Richard E., healing time for pruning wounds in red pine plantation	15571
Loney, Robert A., geology of Fresh-water Bay area, Chichagof Island, Alaska	6545
Long, A. T., ground-water geology of Edwards County, Tex.	12235
Long, H. Alan, criminal aspects of tax violations under U.S. laws	15635
Long, Mary E., New Zealand's agricultural production, marketing and trade policies and their bearing on U.S. farm exports	17359
Long Beach, Calif.: census of housing, 1960, standard metropolitan statistical area, components of inventory change	1906
occupational wage survey— departmental edition	14469
document edition	13450
Long Island, fresh ground water, availability in Montauk Point area	14031
Long Island Jewish Hospital, vocational rehabilitation projects, final report	21153
Long Island RR., accident	10359
Longevity, problems, Bulgarian study	14348
Longitudinal aerodynamic characteristics at low subsonic speeds of highly swept delta wing utilizing nose deflection for control	1289
Longitudinal stability, <i>see</i> Stability of aircraft.	
Longleaf pine, <i>see</i> Pine.	
Longshoremen: accident statistics, base for accident prevention	9041
labor legislation, amend merchant marine act, hearings—	9942-43, 15323
longshoremen and harbor workers' compensation act— as extended	393
hints for employers reporting injuries	16270
North Atlantic longhoring, wage chronology, 1934-61	7144
stevedoring industry, maritime safety data, hoisting vehicles	14449
Longwell, Chester R., reconnaissance geology between Lake Mead and Davis Dam, Ariz.-Nev.	15610
Loomis, N. H., growing American bunch grapes	7562
Looney, Warren F., basic data on economy of United Arab Republic	12253
Loosanoff, Victor L., shellfish hatcheries and their future	13956
Lopez-Blanco, Federico, relief	11767, 16994, 17214
Lorain, Ohio, detached breakwater and navigation entrance to harbor, hydraulic model investigation	13887
Loran, stations, defense, construction appropriations, 1964, hearings	15298
Lord, Douglas R., pressure distributions and aerodynamic characteristics of spoiler-type controls on trapezoidal wing	3107
Lore, George R., relief	13500
Lorenz, Walter C., oxidation of coal mine pyrites	14512
Loreto Department, Peru, petroleum resources and uranium possibilities of Pucallpa region	14998

	Entry
Los Angeles, Calif.: aeroradioactivity survey and related surface geology of region	5927
census of housing, 1960, standard metropolitan statistical area, components of inventory change	1906
Communist and Trotskyist activity within Fair Play for Cuba Committee, report and testimony, additional copies, report	11857
consumer expenditures and income, 1960	12789, 14458
electric facilities of area, maps	520, 2266
fallout-radiation protection provided by selected structures, evaluation	5928
income, education, and unemployment in neighborhoods	5456
metropolitan region impact of growth on demand for outdoor recreation facilities in southern California, 1976 and 2000	3249
occupational wage survey— departmental edition	14469
document edition	13450
post offices mail-flo systems, feasibility and effect of systems upon operating costs, GAO report	20717
relocation of elderly people, hearing	8090
Veterans Administration house-keeping quarters, renovation, GAO review	5007
Los Angeles-San Gabriel River Basin project, additional monetary authorization, report	15236
Losch stoker, <i>see</i> Stokers (mechanical).	
Lotteries, law against	9326, 12971
Loudoun County, Va., commitment of persons of unsound mind found on Federal reservations to St. Elizabeths Hospital, report	13605
Louisiana: annual survey of manufacturers, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4570
Calcasieu River and Pass, salt water barrier system, construct, engineer report— departmental edition	4838
document edition	4688
census of population, 1960, characteristics	15044
climatological data	3517
county business patterns, activities covered by OASDI program	13285, 18675
5B redevelopment area, statistical profile	13353
flood control survey, etc., Atchafalaya River, Morgan City to Gulf of Mexico, engineer report— departmental edition	2178
document edition	2096
floods of Apr.-June 1957	8352
forest industry statistics, 1962	19273
Gulf Coast area, analysis of crude oils	16337
Gulf Intracoastal Waterway, channel improvement, engineer report— departmental edition	418
document edition	266
landings, fishery products	3879
mineral industry, minerals yearbook chapter	3063
north, oil-productive formations, analyses of brines	18099
plane coordinate projection tables	4635



# INDEX 1963

Entry	Entry
Louisiana—Continued	
precipitation data, hourly-----	3771
weather stations, decadal census-----	16672
ZIP code directory-----	20042
Louisville, Ky.:	
electric facilities of area, maps----	517, 2266
ground-water resources of area, 1949-55, progress report-----	15616
occupational wage survey-----	12795
departmental edition-----	11739
document edition-----	
Standiford Field, weather observa- tions, hourly summary, decen- nial census-----	20235
Louse, <i>see</i> Lice.	
Love, Esther M., seafaring premium pay on privately operated United States flag merchant ships-----	16315
Lovering, Thomas S., geothermal gradient measurement in drill holes less than 60 feet deep, East Tintic district, Utah-----	15606
Louvers, vinyl-coated glass fiber screening cloth, standard of trade-----	4513
Lovsin, Martja, relief-----	11931, 15217,
Low frequency narrow band pass ac- tive filter-----	11483
Low-power tests of Plum Brook reactor-----	7258
Low-rent housing, <i>see</i> Housing.	
Lower Klamath National Wildlife Refuge:	
administration-----	
hearings-----	10017
report-----	13757
Lower Paxton Township, Pa., popula- tion, special census-----	167
Lower Providence Township, Pa., population, special census-----	163
Lubbock, Tex.:	
Municipal Airport, weather obser- vations, hourly, summary, de- cennial census of climate-----	16664
occupational wage survey-----	16283
departmental edition-----	15174
document edition-----	
Lubricants:	
aircraft-oil analysis system for operational use in field, feasi- bility investigation-----	14749
antioxidation effectiveness of mo- tor-oil additives-----	18513
antioignition at elevated pres- sures-----	1248
Federal item identification guides for supply cataloging, suppli- ments-----	3657
Federal supply catalog-----	
identification list-----	19076
management data list-----	19077
Federal test method standard-----	20682
ice adhesion-shear strength to clean and lubricated surfaces-----	11174
mechanical picker lubricants, de- tecting, etc., on cotton-----	1631
minimum-oil-flow requirements of high-speed ball bearings at temperatures to 800° F-----	20993
motor oil effectiveness in reduc- ing sprouting on pruned white oak trees-----	13988
oils and greases, sales, 1962, cur- rent industrial reports-----	18686
world retail prices and taxes on motor lubricating oils, 1962-----	16348
<i>see also</i> names of lubricants.	
Lubrication, boundary, characteris- tics of bearing steel in liquid oxygen-----	5589
Lucas, James G., gaseous-film cooling of rocket motor-----	19935
Lucas, Robert C., visitor reaction to timber harvesting in Boundary Waters Canoe Area-----	6509
Lucero, Frank N., T-37/J-69 engine vibration tests-----	9607
Lucke, William H., brief survey of elementary thermoelectric theory-----	18239
Luggage, <i>see</i> Baggage.	
Luidens, Roger W., air-turbo-rocket engine performance-----	5520
Luke, I. F., alkaline battery evalu- ation-----	5849
Luks, Eugene M., transformation of equations of motion of meteor- ology into arbitrary orthogonal coordinates-----	9602
Lum, Frances, information services, and public speaking and writ- ing-----	11511
Lumber:	
and allied products, military hand- book-----	4797
cargo, tariff filing requirements ex- clude-----	
law-----	17033
reports-----	13699,
Englemann spruce, grade recovery in Colorado-----	12190
Federal item identification guides for supply cataloging, suppli- ments-----	3655
imported, marking requirements, hearing-----	8103
imports, 1961-----	4558
in world context (remarks)-----	9778
industry-----	
outlook for 1963 and review of 1962-----	5982
pine, Mississippi-----	1469
kiln drying, Douglas fir, change of grade and volume-----	2315
mahogany, drying with solar radia- tion in Puerto Rico-----	8296
plant quarantine import require- ments of foreign countries-----	1653
production-----	
and mill stock, 1962, current in- dustrial reports-----	18683
Illinois, 1961-----	6506
Nevada, 1960-----	570
publications, price list-----	18278
reshipments to Puerto Rico, Sec- retary of Commerce to suspend for 2 years requirements for exclusive use of U.S. vessels, report-----	25073
softwood-----	
imports impact on U.S. industry, hearings-----	13799
Tariff Commission report-----	5752
southern pine-grade yields-----	6522
West Virginia wood-using indus- tries, raw materials survey-----	12189
<i>see also</i> Logs.	
Lumbering:	
advance reproduction of ponderosa pine, logging damage-----	6485
Arizona pine forest, effect on under- story vegetation and deer use-----	4987
effect of road design on cost of haul- ing logs, logging road hand- book, addenda-----	4347
fair labor standards act, applica- bility to logging operations-----	16648
logging farm wood crops-----	23
logging slash flammability after 5 years-----	10215
publications, list-----	12155
soil erosion control structures on skidtrails-----	10237
timber harvesting in Boundary Waters Canoe Area, visitor re- action-----	6509

	Entry		Entry
Luminescence, <i>see</i> Electroluminescence—Light — Radioluminescence.		Lutetium oxide, high temperature spectral emissivity	14987
Luminescent material:		Lutetium sesquioxide, high temperature heat contents and entropies	14513
luminescent tagged air mail postage stamp (poster)	14645	Luther, Larry V.:	
use in microbiological studies, USSR studies	15862	economic developments in Thailand, 1962	6617
Luminescent microscopy study of tissue culture cells during initial phase of their interaction with Sendai virus, USSR	12491	establishing business in Thailand	6605
Luminescent serums, USSR	14338	Lutz, H. J., early forest conditions in Alaska interior	19250
Lumsdaine, A. A., evaluating self-instructional machines	10064	Lutz, S. G., antenna beam elevation angle for control of tropospheric interference between space system earth terminals and terrestrial stations	18192
Lunar, <i>see</i> Moon.		Luxembourg:	
Lunar charts and mosaic series, U.S.A.F.	1771, 5878-79, 7619-20, 9618-19, 11508, 13210-211, 16781.	friendship, establishment, and navigation treaty	11323
Lunar flight study series	12883	import tariff system	6604
Lunar landing propulsion considerations	5610	plant quarantine import requirements	4345
Lunar missions, <i>see</i> Moon.		steel wire rods, determination of no injury or likelihood thereof to U.S. industry	13095
Lunar occultations of 2 discrete radio sources, 1963-64	21029	Luyet, B. J., observations on extent of injury caused by formation of ice in feet of mice	1756
Lunar science:		Lykes Bros. Steamship Co., leader in replacement program of merchant marine (remarks)	3049
research in space exploration, papers	5542	Lyman, C. P.:	
spray ejected from lunar surface by meteoroid impact	9182	autonomic control of circulation during hibernating cycle in ground squirrels	13204
Lunar thermal emission measurements	50	circulation in mammalian hibernation	11488
Lunar trajectories, <i>see</i> Trajectories.		Lyman-Mountain View, Wyo., ground water and geology resources of area	20744
Lund, Everett E., blackhead of turkeys and chickens, control	7568	Lymphosarcoma, <i>see</i> Tumors.	
Lund, Herbert Z., melanotic tumors of skin	6312	Lyn Fong Y. Hom, <i>see</i> Woo You Lyn.	
Lundberg, R. E., heat transfer with laminar flow in concentric annuli	18158	Lyn Tong Y. Hom, <i>see</i> Woo You Lyn.	
Lundgren, Allen L., diameters and numbers of trees in red pine stands greatly affected by density, age, and site	15567	Lynch, C. T., growth, etc., of alumina whiskers	7591
Lundie, Janet, <i>see</i> Farmer, Janet L.		Lynch Creek, beryllium-tungsten prospect, sampling	1252
Lundquist, Raynard V.:		Lynnhaven Inlet:	
desiccation of caustic leach liquors containing alumina	1239	bay and connecting waters, channel improvement, engineer report—	
recovery of alumina from anorthosite using lime soda sinter process	18102	departmental edition	426
solubility characteristics of monocalcium aluminate	19866	document edition	271
some characteristics of iron in lime soda sinter process for recovering alumina from anorthosite	1230	Lyon, A. W.:	
Lung, Chang Ah, relief	8038	remarks—	
Lungs:		May 17, 1963	9779
anesthesia and lung surgery, USSR studies	17979	June 17, 1963	13380
cancer—		Lyon, R. J. P., infrared spectrophotometry for compositional analysis of lunar, etc., soils	9189
and air pollution	1416	Lyon, Richard H., nonlinearity in random vibration of structures	9190
familial aggregation among hospital patients	12991	Lyons, M. F., UO <sub>2</sub> swaged powder fuel rod failures at high thermal performance conditions	16840
morbidity in relation to air pollution, USSR study	5396	Lyons, W. James, impact phenomena in textiles	3307
carcinoma, lobectomy, USSR study—formaldehyde perfusion and methylene blue gross staining technique in dry fixation of tissue	16118	Lysozymes, clinical use, USSR experimental study	8892
pathoanatomical radiation-induced changes	9668		
thermoregulation and cardiopulmonary function, effect of induced hypoxia	11495		
<i>see also</i> Pneumoconiosis.			
Lunin, Jesse, annotated bibliography on freezing and thawing of soils	14832		
Lupine, livestock poisoning in Western States, reducing losses	14856		
Luraschi, Luigi G., relief	11768, 16984, 17224		

# INDEX 1963

Entry	Entry
McAfee, E. L., bi-directional computer updating equipment (CUE), test and evaluation.....	5751
McAllen, Tex., consumer expenditures and income, 1960.....	14460
McAlpine, Robert G., comparison of growth and survival between sycamore seedlings and cuttings.....	17499
McAulay, John E., cold-air investigation of 3 variable-throat-area convergent-divergent nozzles.....	10991
McCall, Clarence M., Jr., oral hygiene for use in space cabin.....	5890
McCallum, William R., highway bond financing, analysis 1950-62.....	21097
McCammon, Bert C., Jr., discount retelling, bibliography.....	1489
McCann, James A.: length and age frequency samples collected from Georges Bank and Gulf of Maine haddock landings, 1956-60.....	8283
length and age frequency samples collected from Georges Bank haddock landings, 1931-55.....	8282
McCarty, Carol L., data on staff and man-hours, out-patient psychiatric clinics in U.S., 1961.....	9222
McCaughey, William J. C., relief.....	20557
McClain, Robert S., beneficiation of aluminum plant residues.....	10952
McClellan, Etsuko M., relief.....	13678
McCloud, John L., III, wind-tunnel tests of helicopter.....	15193
McCollum, John, manpower development and training.....	12886
McCollum, Robert, list of Russian serials being translated into English and other western languages.....	19336
McConnell, Beatrice, paper, Jan. 31, 1963.....	1191
McCormack, George R.: injuries and accident causes in fabrication of structural steel and architectural metalwork.....	16697
work injuries and work-injury rates in hotels.....	1158
McCormick, E. M., nonconventional technical information systems in current use.....	1160
McCurdy, Dwight R., Ohio's private outdoor and forest recreation enterprises.....	3316
McDanel, David L., stress-strain behavior of tungsten-fiber-reinforced copper composites.....	15556
McDearmon, Russell W., investigation of normal-force, axial-force, and pitching-moment characteristics of blunt low-fineness-ratio bodies of revolution at Mach number of 3.55.....	19917
McDermott, Edward A., address, Nov. 15, 1962.....	11012
MacDonald, Charles B., Siegfried Line Campaign.....	392
MacDonald, F. B., Cerenkov-scintillation counter measurements of nuclei in primary cosmic radiation.....	12819
MacDonald, Gordon J. F., free oscillations of earth, study.....	16375
McDougal, Robert B., mineral industry of Oklahoma.....	7301
McDowell, M. E., Army's irradiated food wholesomeness program, review.....	1221
McDowell, M.R.C., lectures, Sept. 1962.....	13246
McDowell County, W. Va., pilot food stamp program, effect on retail food store sales.....	7313
McFadden, Ernest B., determining efficiency of crew and passenger oxygen masks.....	8145
McFarland, M. Carter, FHA experience with mortgage foreclosures, etc.....	5955
McGee Bend Dam: designate Sam Rayburn Dam and Reservoir— law.....	4893
reports.....	17053
McGibony, John R.: hospital emergency service, criteria for organization.....	15242, 17255
hospital medical records, criteria for administrative evaluation.....	14664
McGouldrick, Paul F., sectoral analysis of velocity.....	16506
MacGowan, Charles F., remarks, May 14, 1963.....	2274
McGowan, William A., research problems pertaining to aircraft operations.....	10313
McGranery, James P.: eulogies, print as House document, report.....	7261
memorial services.....	11853
McGrath, Edward J.: dehydrofrozen apple slices.....	20453
market potential for superconcentrated apple juice.....	4361
McGrew, John R., strawberry diseases.....	5828
McGrew, Laura W., geology of Fort Laramie area, Wyo.....	4351
McGuinness, C. L., role of ground water in national water situation, etc.....	19294
McGuire, James K., White Sulphur Springs, W. Va., climatic summary.....	17535
McGuire, Judson U., method of estimating face fly populations on cattle.....	18367
Machine accountants, see Accountants.....	1625
Machine guns, national firearms act, code of Federal regulations.....	6583
Machine industry (Chinese periodical): translations.....	20861
Machine shops, electronic machine helps shop, USSR study.....	5385
Machine tools: calculating norms for incomplete production, USSR study.....	12723
construction, development in Communist China.....	6827
disposition of equipment and materials, agreement with United Kingdom of Great Britain and Northern Ireland.....	20181
efficiency and standardization, USSR study.....	6789
industry, outlook for 1963 and review of 1962.....	4545
new maintenance standards, East German study.....	15908
plastic tools, as manufacturing aids, fabrication and utilization.....	11198
tool driving or impacting, classification bulletin.....	14638
world trade, 1959-60.....	18637
Machine translations, see Translating machines.....	
Machinery: abstracts pertaining to Communist China in Soviet journals.....	19567
machine building.....	963, 8939, 12726

	Entry		Entry
Machinery—Continued		MacKallor, Jules A., aeroradioactivity	
chemical machine building—		survey and areal geology of	
non-metallic materials for slid-		Georgia nuclear laboratory	
ing bearings-----	20315	area, northern Georgia (ARM-	
USSR industrial development,		1)-----	11552
translations-----	728,	Mackay, Donald R.:	
763, 10494, 10526, 10617,	10843,	report on technical investigation of	
12340, 12427, 14267, 15764,	15764,	odometers-----	18194
15821, 15914, 17584, 17623,	17623,	slow-flow meters for fuel oil dis-	
17949, 19573, 20805.		tribution systems-----	18195
machine building—		McKay, James M., X-15 airplane land-	
hot pressing technology, USSR-----	6865	ing loads and dynamics-----	11015
Novokramatorsk plant, USSR		Mackay, John S., variational method	
study-----	10825	for optimization of interplane-	
nuclear energy development,		tary round-trip trajectories-----	7279
tasks of industry, Yugoslav		McKee, Herbert C., gas chromat-	
study-----	5193	graphic measurement of space	
planning production costs in		cabin contaminants-----	7293
plant, USSR study-----	20817	McKee, Lynne G., hydraulic press	
specialization and automation in		for laboratory preparation of	
USSR industry-----	7130	fish press cake-----	8274
technology handbook-----	7645	McKee, Stella, relief-----	7884
transport determination of unit		McKenna, Joseph P., export trade and	
cost of output, USSR-----	15840	small manufacturer-----	1480
USSR challenge to U.S.-----	7742	McKenzie, Jess M., calibration of	
manufacturing, industry wage sur-		electronic counter and pulse	
vey-----	9061	height analyzer for plotting	
new, bases for economic planning,		erythrocyte volume spectra-----	20337
USSR study-----	19490	MacKenzie, Vernon G.:	
polymers and machine construc-		addresses, etc.-----	3281
tion, USSR studies-----	10604	Jan. 8, 1962-----	3271
power, USSR industrial develop-		Feb. 20, 1962-----	7409
ment, translations-----	1020,	Nov. 28, 1962-----	
2480, 5353, 10618, 12285, 14271,	15824,	Mackerel:	
15713, 15765, 15806, 15824,		Indian Ocean fishes, preliminary	
17683, 17973, 19570.		field guide-----	16430
reliability and durability, USSR		larvae of mackerel-like fish, from	
technical progress and ques-		Indian Ocean, USSR study-----	14186
tions concerning-----	8710	MacKevett, E. M., jr., geology of Red	
repairmen 3 & 2, Navy training		Devil Quicksilver Mine, Alaska-----	15604
course-----	1368	Mackie, Romaine P., special educa-	
special industry, Federal item		tion personnel in State educa-	
identification guides for supply		tion departments-----	385
cataloging, supplements-----	3659	McKlever, Margaret F., occupational	
USSR industrial development, gen-		health services for employees,	
eral information-----	19684, 19721	guide for State and local gov-	
see also names or types of ma-		vernments-----	18287
chinery—also subjects for		McKinney, Carl M., Louisiana and	
which machinery is used.		Texas crude oils, analysis-----	16337
Machines, see Machinery—also spe-		McKinney, William A., segregation of	
cial kinds of machines, e.g.		copper ores by direct-firing	
Slot machines.		methods-----	10950
Machining refractory materials-----	56	McLaughlin, Patsy A., benthic in-	
Machinists:		vertebrate fauna of eastern	
composing room, joint apprentice-		Bering Sea-----	8279
ship committees and training		MacLay, Robert W., geology and	
in new processes-----	5901	ground-water resources of	
mate 3 & 2, Navy training course-	12942	Elizabethon-Johnson City	
see also Aviation machinists.		area, Tenn-----	5025
Machisak, John C.:		McMahon, A. D.:	
employment and injuries in min-		cadmium-----	14494
eral industries-----	1200	zinc-----	19883
injury experience in—		McMahon, W. R., high temperature	
coal mining, 1960, analysis of		spectral emissivity of yttrium,	
mine safety factors, related		etc., oxides-----	14987
employment and production		Macmillan, Robert T.:	
data-----	1207	salt-----	19876
metal industries, 1959-----	16323	sodium and sodium compounds-----	18107
metal industries, 1960-----	18073	water-----	20974
nonmetal industries (except		McMinn, James W., precommercial	
stone and coal), 1959-----	19835	thinning of slash pine-----	17496
quarrying, 1959-----	16322	McMinn, John H., Medical Depart-	
quarrying, 1960-----	14499	ment, Army, personnel in	
national safety competition of		World War II-----	16832
1961-----	7209	McMurray, Joseph P.:	
MacIntyre, Everette, statement, Jan.		addresses-----	
22, 1963-----	4934	Nov. 28, 1962-----	494
Maciolek, John A., limnological or-		Dec. 15, 1962-----	499
ganic analyses by quantitative		Jan. 29, 1963-----	4890
dichromate oxidation-----	2297	Jan. 30, 1963-----	4891
McIsaac, J., density measurements		Mar. 1, 1963-----	6403
from satellite-----	11480	Apr. 17, 1963-----	8231
		May 21, 1963-----	10150
		Sept. 30, 1963-----	19171

# INDEX 1963

	Entry		Entry
McMurray, Joseph P.—Continued		Magnesium:	
address—continued		alloys, vibration damping capacity	1250
Oct. 9, 1963	19172	aluminum-magnesium alloy plates,	
Oct. 21, 1963	19175	welded, mechanical properties	20013
Nov. 4, 1963	20670	compounds—	
McNairy County, Tenn., forest in-		indium effect on solid solubility	5496
ventory statistics	3379	materials survey	19839
McNary Dam, fish passage report,		minerals yearbook chapter	19844
1961	396	dermal excretion, relation to bal-	
McNitt, Harold A.:		ance, etc.	1813
economic developments in Finland,		industry, outlook for 1963 and re-	
1962	8391	view of 1962	4527
preparing shipment to Finland	5084	materials survey	19839
Macon, Ga., Cochran Field, weather		metabolism, temperature effects	18471
observations, hourly, sum-		mill products, current industrial	
mary, decennial census of cli-		reports	3574
mate	14785	minerals yearbook chapter	12833
MacPhail, John F., relief	13505	primary, quarterly report	4106
McQuaig, James A., relief	17096	production, etc., 1962, preliminary	
McQueen, A. H., telemetering trans-		report	3059
mittals for in-core power mon-		Magnesium molybdate, heats and free	
itoring, in-core instrumen-		energies of formation	3098
tation development program,		Magnesium monomolybdate, low tem-	
quarterly progress report	18573	perature heat capacities and	
McRae, Edith A., relief	11935	entropies at 298.15°K	3101
Macrophytes, see Aquatic plants.		Magnesium oxide:	
McShera, John T., Jr., aerodynamic		and metallic chromium composite,	
drag and stability of towed		mechanical properties, etc.	14555
inflatable decelerators at super-		pericase, thermodynamic data	18103
sonic speeds	9157	thermal expansion, interlaboratory	
Macula lutea, see Retina.		study	3076
McVay, Thomas L., rotation of ky-		Magnesium vanadates, low-temper-	
anite-quartzite rocks, Graves		ature heat capacities and en-	
Mt., Ga.	16338	tropies at 298.15°K	3088
McVey, William H., calculating U-235		Magnet Cove, geochemistry and pe-	
outputs and charges	15010	trology of alkaline igneous com-	
Macy, John W., Jr., address, May 9,	18730	plex	12229
1963		Magnetic cores, see Cores (magnetic).	
Macy, Paul T., aquatic biology and		Magnetic fields:	
oceanography, selected list of	10193	arbitrary direction, absorption co-	
books		efficient of atoms in reverse	
Madden, Joseph M.:		Zeeman effect	18170
application to job evaluation of		boundary layer with arbitrary pres-	
policy-capturing model for an-		sure gradient and magnetic	
alyzing individual and group		field, analysis	11044
judgment	16787	constant dipole, hydromagnetic	
effects on judgment of variations		wave propagation	3160
in rating scale format	7626	Crab Nebula and its central star	1320
officer job evaluation—		directional correlation attenuation	
factors, preliminary study	18494	coefficient tables for combined	
in terms of merited pay versus		magnetic dipole and randomly	
merited grade	16785	oriented electric quadrupole	
prediction of officer job rankings		interactions—	
from ratings on 2 sets of job		spin of intermediate nuclear	
evaluation factors	16786	state 1-1 and 1-2	7712
Maddux, James T., relief	13683	spin of intermediate nuclear	
Madell, J. T., spatial distribution of	17089	state 1-3/2 and 1-5/2	7713
neutron flux on surface of		earth's magnetic field on—	
graphite-lined cavity	5940	Antarctic peninsular traverse,	
Madison, Wis.:		results of measurements 1961-	
motor carrier accident	14076	62	16958
Truax Airfield, weather observa-		Ellsworth Highland and Mc-	
tions, hourly, summary, decen-		Murdo-to-Pole traverses, re-	
nial census of climate	14797	sults of measurements, 1960-	
Madison County, N.C., forest inven-		61	1951
tory statistics	3380	finite helical solenoid	19937
Maemates, see Weevils.		line current in transverse rarefied	
Magazines, see Periodicals.		plasma stream	5582
Maggiora, Clara G., relief	9847	motion of idealized plasma ring	
16993	17213	through traveling-magnetic-	
Maghreb, industrialization and unity		wave plasma accelerators	11031
of, translations	15918	orientation of resonance for cold	
Magill, Arthur W.:		multiconstituent plasma	16391
evaluating ecological trends on		quiet-time proton belt	7284
campgrounds	19262	radiation belts	12873
evaluation of campground condi-		radiation model belt numerically	
tions and needs for research	17483	computed	1284
Maglieri, Domenic J.:		sheath instability in high-density	
in-flight shock-wave pressure mea-		rf induction plasma, study	11177
surements above and below		sheath near plane electrode bound-	
bomber airplane at Mach nos.		ing collisionless plasma in mag-	
1.42 to 1.69	20990	netic field	19936
response of light airplanes to sonic		spherical harmonic analysis	16770
booms	16405		



	Entry		Entry
Magnetic fields—Continued		Magneto-optics, absorption coefficient	
torques produced on rotating cylinders, etc.	5613	of atoms in reverse Zeeman effect with arbitrary direction of magnetic field	18170
use to decrease interelectrode space change of magnetic triode	1309	Magnetoresistance, <i>see</i> Electric resistance	
Magnetic materials:		Magnetos, overprocurement for reciprocating aircraft engines by Navy Dept., GAO review	13998
aluminum-iron magnetic alloys and associated systems, review	12958	Magnets, magnet systems design, theory and methods	5942
ferromagnetic films, structural properties	87	Magoffin County, Ky.: coal geology of Selts quadrangle	598
non-metallic tables to determine ferrimagnetic resonance linewidth	9215	geology and coal resources	10274
transportation of magnetized materials, Federal aviation regulations	13901	Magyar kemikusok lapja (periodical): translations	12588
Magnetic recorders, <i>see</i> Tape recorders		Magyar tudomány (periodical): translations	8751
Magnetic recording systems, OTS selective bibliography	13266	Mah, Alla D.: heats and free energies of formation of barium oxide and strontium oxide	5497
Magnetic resonance:		heats and free energies of formation of vanadium nitride and vanadium carbide	7214
and Zeeman phenomenon, USSR study	5280	Mahar, James F., finding new products for small manufacturers	1463
electron parametric spectra arising after mechanical and thermal processing of natural cystine-containing polymers, USSR study	19587	Mahar, Mary H., school library as materials center, proceedings of conference	19117
Magnetic storms:		Mahogany: seedlings, height growth	8295
F2 layer disturbance estimation in high latitudes, USSR study	6908	solar radiation used to dry lumber in Puerto Rico	8296
geomagnetic, solar radio bursts, type IV, and polar caps absorption (PCA) events	20132	Maida, Giuseppe, and family, relief	18837
solar radio bursts of spectral type 2 and 4, relations to optical phenomena and to geomagnetic activity	9386	Mail carriers: centennial of free city delivery, commemoration (remarks)	21071
sudden commencement on Sept. 30, 1961, protons and electrons observed by Explorer XII	9175	rural, instructions to applicants for examinations	6033
Magnetism:		Mail-flo systems, inadequate studies to determine feasibility and effect of systems upon operating costs at Philadelphia, Denver, Los Angeles post offices, GAO report	20717
earth	1953	Mail matter: carrying and handling, cost ascertainment report, 1962	11206
heat resistant paramagnetic polymer, obtaining	18514	Communist political propaganda, exclusion from U.S. mails, hearings	15327
magnetic and electric forces for rotating shaft suspension, investigation	7593	fraud and mailability, enforcement action, monthly releases	3738
susceptibility of alderite	10957	transportation by railroad companies, Post Office Department, railway post office requirements, contracting practices, etc., GAO review	19286
systems of units, errata	7311	ZIP code, last word in mail addressing	16487
<i>see also</i> Magnetograms— <i>also</i> headings beginning Magnetic		<i>see also</i> International postal service—Parcel post	
Magnetite, St. Lawrence County district, northwest Adirondacks, N.Y. regional geology	2348	Mail-order business, selling by mail-order, bibliography	3323, 20128
Magnetization, spontaneous in solid bodies, research	9596	Mallers, joint apprenticeship committees and training in new processes	5901
Magnetogasdynamics, <i>see</i> Magnetohydrodynamics		Mailing list houses, national directory	18309
Magnetograms, MHV series	197, 4633-34, 7796, 9765, 11672, 15118, 16959, 20388	Mails, <i>see</i> International postal service	
Magnetohydrodynamics:		Maine: conference in matter of pollution of interstate waters of Androscoggin River proceedings	3276
and plasma physics—bibliography	4439	county business patterns, activities covered by OASDI program	11614, 18669
controlled nuclear fusion research, conference proceedings, Salzburg, Sept. 4-9, 1961	14958	landings—fish and shellfish by county, gear, and subarea, annual summary, 1962	13947
space exploration, papers	7235		
effects at cathode of plasma diode as model of magnetogas dynamic energy conversion, USSR study	12498		
generators, thermodynamic cycles of atomic power stations, USSR study	19543		
hydromagnetic wave propagation in constant dipole magnetic field	3160		
optimizing operation of MHD generators, USSR study	6894		
vortex type magnetohydrodynamic induction generator	18161		

# INDEX 1963

	Entry		Entry
Maine—Continued		Malagasy:	
landings—continued		health information for travel in....	16497
fishery products—		investment guaranties, agreement....	20176
annual summary by months,		investment law.....	6616
1962.....	13948	minerals resources.....	20950
monthly.....	3881	Malaria, preventive medicine in World	
lobster population biological fluctu-		War II.....	11551
ations check, use of environ-		Malathlon, protecting raisins against	
mental and economic factor....	4944	insects during drying and stor-	
minerals industry, minerals year-		age with malathlon-treated	
book chapter.....	19849	trays.....	7575
population, 1960, characteristics....	18652	Malaya:	
potato futures, trading.....	7815	Commission on Educational Ex-	
redevelopment area, 5B, statistical		change, agreement.....	9436
profile.....	13369	economic developments, 1962.....	8405
sea scallop populations, method of		general information fact sheet....	13062
predicting fluctuations.....	4946	population.....	14201
shrimp landings, fluctuations.....	15519	Malaysia:	
Silurian corals from Moose River		birth of an Asiatic Federal State....	19617
synclineorium.....	6556	birth of new nation.....	18535
wood particle board manufacture,		independence proclamation, celebra-	
potential.....	1472	tion in Kuala Lumpur.....	19624
ZIP code directory.....	20043	Manila conference on formation of	
Maine, Gulf of, haddock landings,		federation, role of Indonesia	
length and age frequency sam-		and Philippines, German stud-	
ples collected.....	8283	ies.....	17684
Maintenance:		Maldonado, Edwin D., solar radiation	
aeronautical antifriction bearings,		used to dry mahogany lumber	
handbook.....	21059	in Puerto Rico.....	8296
Air National Guard, maintenance		Malheur County, Oreg., Cow Valley,	
management.....	21031	ground water resources.....	613
aircraft—		Malheur National Wildlife Refuge,	
certification procedures, hand-		birds.....	15530
book.....	19164	Mall, trade and payments agreement	
crews, weather factor effects in		with Cuba.....	2864
Arctic areas.....	18482	Malignant tumors, see Cancer.	
small, FAA handbook.....	19166	Mallinowski, Zenon S., personal factors	
supervisor's manual.....	18556	in choosing site for small man-	
airport surveillance radar, ASR		ufacturing plant.....	1461
facilities, handbook.....	19169	Malone, Kevin, mineral industry of	
control lines, FAA handbook.....	8218	Alaska.....	19847, 20953
electric power distribution systems		Maloney, Raymond P., trenching and	
at naval shore activities.....	11419	sampling of rhyolite mercury	
instrument landing system glide		prospect, Kuskokwim River	
slope equipment, handbook.....	20659	Basin, Alaska.....	3096
machine tools, new standards, East		Maloyaroslavets, Russian SFSR, city	
German study.....	15908	progress, Kaluga oblast.....	8518
maintenance and safety in indus-		Malt liquors, industry, outlook for	
try.....	1156	1963 and review of 1962.....	4537
preventive, of motor vehicles,		Maltzoff, Eugene M., fall chinook salm-	
guide.....	7479	on returns to hatcheries, Bon-	
radar microwave link equipment....	13893	neville Dam pool area.....	6468
synchro-servo fundamentals		Mammals:	
course.....		Aransas National Wildlife Refuge....	4964
instructor's training guide.....	7363	close-in effects of underground nu-	
trainee's guide.....	7364	clear detonation.....	11576
weapons systems, design for main-		cytochemistry of blood glycogen	
tainability.....	11477	after single whole-body X-irra-	
Maintenance of equipment:		diation, USSR study.....	8838
aerospace accident and maintenance		Desert Game Range.....	4967
review.....	3421	hibernation, control of circulation....	11488
aerospace maintenance safety.....	7603	Kofa Game Range.....	6461
Air Force weapons system, inte-		marine, world, list.....	10200
grated design, guide.....	1767	protection against ionizing radia-	
controllable pitch propeller, LST		tion, chemical, USSR study.....	10619
1156 class, manual.....	3321	protection against radiation, USSR	
medical, at technical level, techni-		studies.....	17906
cal manual, changes.....	1809	Salt Plains National Wildlife Ref-	
Maintenance shops, equipment, Fed-		uge.....	4966
eral item identification guides		San Andres National Wildlife Ref-	
for supply cataloging, suppl-		uge.....	4963
ements.....	3654	Santa Ana National Wildlife Ref-	
Maintenance technicians, examina-		uge, list.....	17459
tion announcement.....	182	sea, ecology and trade, USSR	
Major agreement expirations and		study.....	6900
reopenings in 1963.....	3037	Wichita Mountains Wildlife Ref-	
Making household fabrics flame re-		uge.....	4965
sistant.....	5825	Yunnan Province, China.....	16234
Making trade act work (address)....	202	Mammoth, Ariz.:	
Makris, Panagiotis, relief.....	6222, 15214, 17007	cenozoic geology in area, Pinal	
Malachite mine, geological, geophys-		County, Ariz.....	8332
ical, and geochemical prospect-		water regimen, San Pedro River,	
ing methods, comparison.....	17521	pilot study.....	15620

	Entry		Entry
Mammoth Cave National Park, general information.....	9241	Manganese—Continued	
Man:		ores—	
complex study next task of contemporary science, USSR.....	7007	and concentrates, electric furnace smelting.....	3078
experiments on human beings in modern foreign medicine, USSR study.....	19710	bacterial leaching.....	1241
higher cortical functions, USSR study.....	14400	stockpiled at Deming, N. Mex. and Wenden, Ariz., flotation and sintering studies.....	1242
man of the future is being trained today, USSR viewpoint.....	1000	recovering by pyrometallurgical processes.....	1204
partial cold water immersion, effects in Arctic.....	18483	recovering from U.S. resources, major proposed processes, review.....	10938
pathophysiology of higher nervous activity, conference on research methods, USSR.....	16177	stockpiling metallurgical-grade ore, Emergency Planning Office and GSA program, GAO review.....	10263
physiology of blood of humans in hot climates, USSR study.....	19707	sulfatization of manganiferous carbonate slates in fluidized bed reactor.....	16330
physiology, USSR study.....	19435	Manganese oxides:	
thermal balance, maintaining.....	11496	toxicity, hygienic significance, etc., USSR study.....	10999
Man-in-space, see Outer space.		translations from Okisly margantza.....	6655
Management, see Administrative management—Industrial management.		Manganese vanadates, heats and free energy of formation.....	9126
Management analysts, examination announcement.....	11663	Manger, G. Edward, porosity and bulk density of sedimentary rocks.....	17525
Management research summary series.....	1446-86	Manglitz, G. R., sources of resistance to sweetclover aphid in introduced species of <i>Mellinus</i> .....	18393
list.....	11268	Manhattan Borough, see New York City.	
Managers:		Manifold paper, see Paper.	
range managers, employment outlook.....	20934	Manila, Philippine Islands, aircraft accident.....	179
refuge, address list, 1962.....	561	Manitowoc, Wis.:	
Manasquan, N.J. to Cape Hatteras and Chesapeake Bay, coastal warning facilities chart.....	11384	harbor improvements, engineer report—	
Manassas River, reclamation district, general information, Chinese study.....	2643	departmental edition.....	415
Manati, P. R., redevelopment area statistical profile.....	13379	document edition.....	236
Manchester, N.H.:		port, harbor conditions, etc.....	2215
occupational wage survey—		Mankowich, A., detergency of 12 to 18 carbon saturated fatty acids.....	12963
departmental edition.....	1172	Man-machine system, see Human engineering.	
document edition.....	277	Mann, Thomas, addresses delivered at Library of Congress, 1942-49.....	16304
Manchuria, geographic characteristics, Air Force pamphlet.....	13202	Manned space flight, 1963.....	12842
Mancini, Armando, solutions of long-line geodetic azimuths by photogrammetric techniques.....	16769	Manning, Charles R., Jr.:	
Maneuver accelerations experienced during routine operations of commercial turbojet transport airplane.....	11070	mechanical properties and metallurgical characteristics of metallic chromium and magnesium oxide composite.....	14555
Manganese:		nickel alloy strengthened by dispersed thorium.....	14585
chemical equilibria and oxidation rates.....	8354	Manning of vessels, see Ships.	
chemistry in natural water (series).....	8354	Manometers:	
deposits—		Moscow plant defines new goals, USSR study.....	2616
Hodgdon and Linneus Townships, southern district, Aroostook County, Maine, investigation.....	3077	use by Hürthle method for data on cerebral circulation, USSR study.....	17893
Maple and Hovey Mountains area, Aroostook County, Maine.....	6554	Manpower:	
electric furnace smelting of high-iron manganiferous materials for producing ferromanganese.....	10958	achieving and sustaining opportunities for workers (address).....	14432
extraction from low-grade dolomitic materials by roast-leach process.....	3079	advancing America's capacity to industrial needs of nation (address).....	3012
ferrograde, differential sulfatizing process for recovery.....	5487	American science, 1960, report of National register of scientific and technical personnel.....	3191
iron-manganese concretions, bacteriogenic formations, Indian Ocean, USSR study.....	15799	area redevelopment report, labor market area—	
mineral industry survey, monthly.....	3882	Ashland, Ky.....	17399
minerals yearbook chapter.....	19845	Detroit, Mich.....	17398
mining and milling methods and costs, Mohave Mining & Milling Co.....	5472	Huntington, W. Va.....	17399
		New Bedford, Mass.....	17400
		Pawtucket, R.I.....	17402
		Pittsburgh, Pa.....	17401
		Providence, R.I.....	17402
		demonstration programs as bridge to employment.....	19781

# INDEX 1963

	Entry
Manpower—Continued	
development and training act of 1962—	
amendments of 1963—	
hearings .....	17325
reports .....	18913
explanation .....	5428
meaning for young people and counselors .....	14440
on the job training .....	18530
Paterson, N.J., program (remarks) .....	18532
projects and problems .....	19336
projects approved July 1, 1962–June 30, 1963 .....	19103
research and training activities, report of Secretary of Labor .....	7139
training activities, report of Secretary of Health, Education, and Welfare .....	6342
training for job .....	12081
training, manpower utilization catalyst .....	14441
training program .....	2173
development and training program, suggested curriculums .....	2161-62
farming and related occupations .....	13845
Government requirements, employment trends, etc. ....	14438
health manpower source book .....	1407, 1236, 12995
impact of technology (remarks) .....	10911
industry, surveys .....	13874
Internal Revenue Service, impact of office automation, study .....	18040
job situation today, including womanpower (address) .....	9023
manpower and immigration, report .....	12774
medical research requirements and resources, 1965-70 .....	7317
meeting needs in science and technology .....	3260
mental health, studies program .....	11105
motivation and preparation of minority groups in newly emerging employment opportunities (address) .....	19775
Navajo land, training .....	12067
new conservation (address) .....	1383
policy—	
and private pension plans .....	12806
program needed for economic stability (address) .....	19780
problems and local action, role of local advisory committees .....	19782
problems, people, skills, and jobs .....	20924
procedures handbook, Army pamphlet .....	14944
professional personnel, placement .....	6355
report of the President, 1963 .....	9031
highlights .....	20924
reports .....	12774, 14437-438, 16266-267
reprints .....	14440-441, 19783
requirements, resources, utilization and training, Labor Dept. report, 1963 .....	9031
research bulletins .....	9032, 10885, 14439, 18016
research sponsored by Office of Manpower, Automation and Training .....	18015
resources—	
development, smaller communities program .....	17407
of nation, training and utilization of nation, hearings .....	17327, 19066
science and engineering professional, in colleges and universities, 1961 .....	3194
scientific research and development in colleges and universities, 1958 .....	9251
science and technology profiles .....	16446

	Entry
Manpower—Continued	
scientific—	
and technical, supply, demand, and utilization, staff study .....	6208
annual conference, 1962, highlights and papers .....	16447
bulletins .....	3195-96
trends, outlook, programs .....	9032, 14439
United States, study of population problems, projection to 1970 .....	296
use of every resource for strengthening Nation's economic potential (excerpts from remarks) .....	12773
utilization in Federal Government hearings .....	13665, 29504
utilization in military installations in Japan, GAO review .....	6535
Manpower, Automation and Training Office:	
manpower and automation research sponsored .....	18015
technical manpower publications and services, list .....	14444
Mansfield, Mike:	
Berlin in a changing Europe, report .....	4774
Viet Nam and southeast Asia, report .....	6298
Manuals, see names of departments, etc., issuing manuals—also subjects.	
Manufactures and manufacturers:	
annual survey of manufactures .....	4562-72, 5989, 7745, 9711, 13270-271, 18639-641.
announcement and order form .....	4561, 6007
bound volume 1961, announcement and order form .....	16902
industry groups and selected industries, general statistics .....	1875, 4562, 13270, 18640
States, standard metropolitan statistical areas, and large industrial counties, statistics—	
East North Central States .....	4566
East South Central States .....	4569
Middle Atlantic States .....	4565
Mountain States .....	4571
Pacific States .....	5989
South Atlantic States .....	4568
West North Central States .....	4567
West South Central States .....	4570
summary, 1959-60 .....	5988
summary, 1961 .....	18639
value of manufacturers' inventories .....	4564
value of shipments .....	13271, 18641
change .....	4563
carload waybill statistics, 1961 .....	2446, 10349
census 1958, subject reports .....	5992
census publications, price list .....	9334
concentration ratios in industry, 1958 .....	2097
print additional copies, reports .....	8078, 9984
reprint pt. 1, report .....	11863
earnings series, summary—	
1939-62 .....	1159
Jan.-Nov. 1962 .....	7143
enterprise statistics, 1958 .....	9727
announcement and order form .....	9710
expenditures for new plant and equipment .....	7745
exports of products, survey of origin, 1960, current industrial reports .....	7760
Federal supply code for manufacturers—	
code to name, supplements .....	3678

# JANUARY-DECEMBER

Manufactures and manufacturers—	Entry
Continued	
Federal supply code for manufacturers—continued	
excluding United States and Canada	4794
name to code, supplements	3677
financial report of corporations	4125
food industries, present and potential use of egg products	13175
injury rates in manufacturing industries	3790
management audit for small manufacturers	7428
manufacturing corporations, profit rates, 1947-62	13945
Materials consumed, census of manufactures, 1958	5992
plastic tools, fabrication and utilization	11198
sales, inventories, etc., industry survey	3785
size structure of industries in U.S., 1958	16558
small business, technical aids	7429
small industries, building success	1462
small manufacturers—	
buying and selling patent	1444
export trade	1480
finding new products	1463
firms, equity and long-term financing sources	1477
firms, equity financing	1476
firms in New Hampshire	1446
management aids	1444-45
	5716, 7426, 20127
opportunities, report based on 1958 census	16557
small manufacturing plants—	
factors determining site	1461
site selection methods	1455
wage developments, summary release	4281
see also names of manufactured articles	
Manure disposal lagoons	16713
Manvel, Allen D.:	
compendium of city government finances in 1962	16888
papers—	
Sept. 5, 1961	7526
Nov. 30, 1961	7527
Manville, Richard H., nutria in United States	4973
Manzanita, greenleaf, defoliation effects by Great Basin tent caterpillar	12162
Map series	9037
Mapel, W. J.:	
geology of Inyan Kara Mountain quadrangle	8331
geology of Newcastle area, Weston County, Wyo.	20728
Maple:	
diseases, control	5821
products, 5th conference, proceedings	16722
sapstreak disease of sugar maple in Lake States, status	12175
sugar maple, dieback in Upper Michigan, 1962	12178
Maple Mountain, geology and manganese deposits of area	6554
Maple sirup:	
microbiology and sanitation in sugarbush and sugarhouse	18404
new use for fluffed maple products—oil-fired sap evaporators, construction of arches and burners	4341
Mapleworm, green-striped, description, control, etc.	8293
Mapping, see Maps and charts—Photographic surveying.	
Maps and charts:	
aeromagnetic and marine exploration in USSR	1087

Maps and charts—Continued	Entry
Aeronautical Chart & Information Center—	
bulletin digest	14898
chart updating manual	5875
agricultural charts, handbook	16729
Air Force Department aeronautical charts, new editions	3420
Antarctic cartographic materials, acquisitions list	33337
aera-elevation information, grid sampling method for obtaining	8298
atlas of monthly mean stratosphere charts, 1955-59, July-December	4390
census publications, price list	9334
Coast and Geodetic Survey—	
aeronautical charts, dates of latest prints	3585
flight information publications, dates of latest prints	3586
instrument approach procedure charts and airport obstruction charts, dates of latest prints—	
eastern U.S.	3587
western U.S.	3588
nautical charts, catalog—	7795
copyrighted, 1962	10027
daily aerological cross sections, pole to pole along meridian 75° W for IGY	7506, 9492, 14778
domestic air mail transportation system	5672
electrical prospecting, rational profiling of isochims, USSR study	6729
explorers' routes, trails and early roads in U.S., list	1192
Federal item identification guides for supply cataloging, supplements	3659
Federal Power Commission, electric facilities	516-523, 2266
flight information publication—	
enroute Alaska	3688
enroute Caribbean and South America	3689
enroute intermediate altitude, U.S.	3963
enroute Pacific and southeast Asia	3695
geodetic topographic work—accuracy in methods of field establishment and frequency sounding, USSR study	2972
Geological Survey—	
released only in open files, 1962, list	19302
water resource development in U.S.	14027
highway planning map manual	21098
Hungary—	
current problems	12677
State Survey and Mapping Bureau's role	7003
lunar charts—	
LAC 56, Hevelius	13210
LAC 59, Mare vaporum	9618
LAC 60, Julius Cnesar	1771
LAC 61, Taruntius	7619
LAC 74, Grimaldi	7620
LAC 77, Ptolemaeus	13211
LAC 78, Theophilus	9619
LAC 79, Colombo	11508
LEM-1B, wall mosaic	16781
lunar reference mosaic, earthside hemisphere	5878-79
mapping, cooperative program, agreement with Ethiopia	9437
mapping electric systems for REA borrowers, guide	21102
Naval Oceanographic Office—	
chart correction list	11141
world port index	18217

Do not order from index; see indicated entry

Page 391



# INDEX 1963

Entry	Entry
Maps and charts—Continued	
new maps of European countries, etc., Dutch reviews.....	12505
Novosibirsk institute of cartography, etc., 30th anniversary, USSR study.....	19420
numerical methods of mapping, handbook for CRPL ionospheric predictions.....	3172
price list.....	3265
principal electric facilities, United States.....	2266
redevelopment and public works acceleration areas.....	16818
Sequoia and Kings Canyon National Parks.....	7337
topographic maps, demand and use in national economy, USSR study.....	12411
United States wall map, print, reports.....	7931, 8082
Weather Bureau, daily synoptic series 3579.....	3579
weather maps, Northern Hemisphere, for IGY.....	20244
see also Aerial mapping—Atlases—also names of localities—also subjects.	
Marblehead Harbor:	
navigation improvement, engineer report—	
departmental edition.....	2212
document edition.....	1982
Marburger, John H., III, galvanomagnetic effects in polycrystalline many valley semiconductors.....	19913
Marchbanks, Vance H., stress responses of pilots.....	4413
Marchessault, Charles E., all altitude capability study for radar land mass simulator system.....	12947
Marcus, S.:	
cold ambient temperature, effect upon adrenal weight of mice.....	18475
effect of low ambient temperatures on specific and nonspecific resistance of mice to bacterial disease.....	1755
low temperature influence on mice resistance to Coxsackie virus infection.....	14911
Mare vaporum, LAC 59, lunar chart.....	9618
Marengo County, Ala., land held by B. A. Cogle, adjudicate claim.....	13468
Margarine, see Oleomargarine.	
Marginal zone of moon.....	19987
Margulis, Alvin, occupational wage survey, Scranton, Pa.....	1174
Maria Clotilde Costa, Sister, see Costa, Caterina.	
Mariana Islands:	
Guam, geology and hydrology (series).....	15611
surface water supply through June 1960.....	2357
Maricopa County, Ariz.:	
geology and ground water conditions.....	6567
manganese mining and milling methods and costs, Mohave Mining & Milling Co.....	5472
sult by David H. and Julia Forman for land title.....	7872, 8042, 9803
Marin County, Calif.:	
Corte Madera Creek, flood control survey, engineer report—	
departmental edition.....	2193
document edition.....	1989
Marine, I. Wendell:	
correlation of water-level fluctuations with climatic cycles in Oklahoma Panhandle.....	8356
ground water resources of Bryce Canyon National Park area, Utah.....	5027
Marine accidents:	
collisions at sea, the President to proclaim regulations for preventing—	
hearing.....	15380
law.....	18778
reports.....	11826, 17275
collisions between vessels, liability apportionment, unify, hearings.....	15379
shipowners, limit liability, hearings.....	15379
statistics, base for accident prevention.....	9041
Marine aids, see Navigation.	
Marine animals, see Marine fauna.	
Marine atlases, see Atlases.	
Marine biocenosis, see Biocenosis.	
Marine biology:	
hydrobiology—	
China.....	6682
Kujbyshev reservoir, USSR study.....	16123
Russian and Chinese studies.....	15673
USSR translations.....	16020
primary production of bodies of water.....	14959
radiation, USSR, studies.....	16264
radioactive carbon in hydrobiological research, USSR study.....	16248
radioactive isotopes, USSR studies.....	17737
USSR studies.....	10564
Marine borers, bibliography.....	12945
Marine Corps:	
chronology.....	16306-310
engineer operations, Fleet Marine Force manual.....	20940
failure to standardize tropical wool trousers, unnecessary costs incurred, GAO report.....	20722
Fleet Marine Force manual FMFM series.....	1193, 3045, 20940
historical bibliographies series.....	16305
historical reference series.....	16306-310
management review.....	3952
military personnel serving as military inspection representatives in Tokyo and Osaka, Japan, Navy, Dept. illegal per diem payment, GAO report.....	20715
occupational specialties and schools, guide.....	19814
officers	
on active duty, combined lineal list.....	9093
professional reading guide.....	3211
register—	
departmental edition.....	12944
document edition.....	11748
operations in Korea, 1950-53, East-Central front.....	1194
personnel, household goods shipments, unnecessary costs to Government for packing, GAO review.....	8325
publications, price list.....	1398
recipe service.....	1566
telling the Marine Corps story, recruiting manual.....	18058
uniform regulations.....	16311
unsatisfactory condition of combat vehicles and equipment in 3d Marine Division (reinforced), Okinawa, Navy Dept., GAO report.....	20725
see also Retired officers, etc.	
Marine Corps Air Station, Beaufort, S.C., warehouse storage facilities construction project, hearings.....	15310
Marine Corps Reserve:	
commissioned and warrant officers, lineal list.....	3046
general information.....	19815
reserve marine (periodical).....	4147

# JANUARY-DECEMBER

	Entry		Entry
Marine engineering:		Mark Twain National Wildlife Refuge,	
Navy and Naval Reserve engineering duty officers, qualifications, assignments, etc.	19993	waterfowl utilization and hunting kill, 1946-60	15537
relations and material specifications	13336	Markeson, Clyde H., economic aspects of marketing Florida avocados	14869
Marine engineers, licenses, specimen examinations	16962	Market gardening:	
Marine evaporites	5024	truck crop production practices—	
Marine fauna:		Broward and Palm Beach Counties, Fla.	2126
characteristics of aquatic fauna composition in relation to salinity of the medium, USSR study	17749	Cameron and Hidalgo Counties, Tex.	15415
ichthyofauna distribution in southeast Bering Sea, USSR study	16257	Colquitt County, Ga.	2127
marine mammals of world, list	10200	Markets and marketing:	
Rumania, Marine Zoological Station of Agiea, activities, etc.	10684	acreage-marketing guides	2
see also Benthos.		4330, 5779-81,	14814
Marine fouling, see Fouling.		agreements and orders, statutes, compilation	1683
Marine geophysical exploration, USSR	6866	agricultural marketing agreement act, amend—	
Marine inspection, see Ships.		hearings	9993, 11869, 12004
Marine meteorological observations	3398	report	17248
Marine phytoplankton, see Phytoplankton.		agricultural marketing (periodical)	3425
Marine science, see Oceanography.		Agriculture Department—	
Marine self-exciting synchronous generators, USSR	5144	50 years of marketing services, exhibit	9528
Marine terminals, see Terminals (transportation).		milestones in marketing, 50 years of services	9530
Marine zoology, see Marine fauna.		Belgium, market for U.S. products, international commerce, supp-	10327
Mariner, see Spacecraft.		business and government, partners in Free World (address)	7806
Mariners, see Notice to mariners.		consumer markets, current materials, list	13261
Mariner's weather log	3883	costs and grower's returns, impact of technological change, case studies	1706
Marines, U.S., in Civil War, bibliography	16305	export marketing for small firms, manual	13042
Marion, Mass.:		foreign crops and markets (periodical)	2305, 3721
hurricane survey, engineer report—		Government market, guide for buying or selling, directory	1493
departmental edition	2226	Libya, market for U.S. products	2382
document edition	1991	low cost aids for higher export profits, services available through Commerce Department field offices	19354
Marion County, Ala., forest inventory statistics	3379	market for U.S. products in Sudan	10345
Marital status, see Marriage.		market news leadets	553-554, 2292-93, 10196, 15524-525, 19233-237
Maritime Administration:		market news service, direct tele-	
cargo development program (remarks)	10931	typewriter hook-up	13150
changes, programs, etc., and their effect on shipping industry (remarks)	9094	marketing and transportation	3885
current regulations, index	10929	marketing bulletins	33, 7570, 11456, 13172-173, 18431
decisions—		marketing information guide	3886
Jan. 1947-Feb. 1952	15491	marketing quotas and allotments, statutes, compilation	1683
Apr. 1952-Mar. 1956	19186	marketing research reports	34-35, 1701-8, 4357-63, 5826-33, 7571-76, 9577-82, 11457-460, 13174-176, 14863-873, 16746-749, 18432-435, 20286-287.
Division of Insurance, duties and functions (remarks)	19816	markets, market structure, and institutional organization of agriculture (lectures)	9529
legislation, hearing	12009	measuring metropolitan markets, guide to use of Government data	9705
releases MA NR series	4070	national directories for use in marketing, bibliography	14687
report, 1962—		new marketing devices through trade missions, etc. (address)	14070
departmental edition	3047	one world, one market (address)	6585
document edition	2031	open market operations, Federal reserve, 1962	10179
research and development program (remarks)	10932	organized marketing work of Agriculture Dept. (address)	20280
SP series	3049-50, 9094-95, 10930-933, 16312, 18059, 19816	our world market, today and tomorrow (address)	10329
surface effect ship, economic potential (paper)	9095	overseas, sell your products in U.S. trade centers	203
Maritime Commission, decisions, Jan. 1947-Feb. 1952	15491		
Maritime gas cooled reactor program, quarterly progress report, etc.	18567		
Maritime industry, see Merchant marine—Shipping.			
Maritime law:			
law of the sea, convention on high seas, adopted at UN conference	5728		
shore and sea boundaries	198		
Maritime safety digest	3884		
Maritime services, see Shipping.			
Maritime Subsidy Board, current regulations, index	10929		

# INDEX 1963

Entry	Entry
Markets and marketing—Continued	Mars (planet)—Continued
research directory, Agricultural	simulated environment—
Marketing Service, field loca-	bacterial content and soil mois-
tions, personnel in charge.....	ture content.....
research procedures, bibliography.....	bacterial synergism, studies.....
Saudi Arabia, market for U.S. prod-	USSR interplanetary rocket.....
ucts.....	Marsden, Charles P.:
services for you from Agricultural	receiving tubes, tabulation of data.....
Marketing Service.....	Soviet electron devices, tabulation
small marketers aids.....	of data.....
States, service programs.....	Marshall, Kathryn, relief.....
world markets—	18985, 20404
opportunities for U.S. business	Marshall, Lawrence G., sand and
(remarks).....	gravel operations and costs,
policies to ensure U.S. products	Minneapolis-St. Paul area,
competitive place.....	Minn.....
<i>see also</i> names or classes of commod-	Marshall Islands, Bikini and nearby
ities, etc, marketed.	atolls (series).....
Marking:	Martian atmosphere, <i>see</i> Atmosphere.
articles imported in containers, re-	Martin, Betty S., look abroad, effects
quirements—	of foreign travel on domestic
hearing.....	outdoor recreation and brief
reports.....	survey of outdoor recreation in
fish and invertebrates.....	6 countries.....
lumber and wood products im-	Martin, Billy G., infrared technology
ported, requirements, hearing.....	and nondestructive testing.....
obstruction marking standards to	Martin, Clarence D., jr.: remarks—
air navigation.....	Feb. 8, 1963.....
pupil marks and school marking	Mar. 14, 1963.....
systems, bibliography.....	May 15, 1963.....
requirements—	June 25, 1963.....
Belgium.....	July 19, 1963.....
Republic of South Africa.....	Oct. 14, 1963.....
shipment and storage, military	Oct. 28, 1963.....
standard.....	Martin, Dale A., decomposition of gyp-
steel products, recommendation of	sum in fluidized-bed reactor.....
trade, amendments.....	Martin, E. Dale, asymptotic expan-
Marmo, F. F., role of interplanetary	sions for singular perturbation
debris in planetary atmos-	problems, etc.....
pheres, sodium in earth's at-	Martin, Edwin M.: addresses, etc.—
mosphere.....	Feb. 18, 1963.....
Marotta, S. F., gaseous tissue nitro-	Mar. 1, 1963.....
gen of rats, etc.....	Martin, Elizabeth M., relief.....
Marquette, Mich., electric facilities of	Martin, Fant W., woodcock status re-
area, map.....	port, 1962.....
Marquis, David A., chemical light	Martin, Gordon E., relief.....
meter for forest research.....	Martin, W. E., close-in effects of un-
Marrella, Pasquale, relief.....	derground nuclear detonation
Marriage:	on vegetation, etc.....
marital status—	Martin, W. Edgar: general-usage facilities and equip-
population characteristics.....	ment for secondary schools.....
population of U.S., census 1960.....	major principles of biological sci-
older persons, trends.....	ences of importance for gen-
remarriage tables, OASDI AND	eral education, list.....
U.S. employees compen-	selected references on facilities and
sation systems.....	equipment for handicapped
statistically oriented studies, bibli-	children.....
ography.....	Martin, Wm. McC., jr., address, Dec.
<i>see also</i> Vital statistics.	28, 1962.....
Marrow:	Martin-Marletta Corporation: Baltimore plant, wage chronology,
bone, cadaverous, response to ther-	1944-61.....
mal burns, USSR study.....	contract with Defense Dept., anal-
mitotic cycle of bone marrow cells,	og computer systems, excessive
study of autoradiographic	cost to Government, GAO re-
method, USSR.....	port.....
MARS, <i>see</i> Military Affiliate Radio	Martino, Domenico, relief.....
System.	13408, 13481
Mars (planet):	Martorana, S. V., survey of State leg-
atmosphere, determining character-	islation relating to higher edu-
istics from gas-dynamic behav-	cation, 1962.....
ior of probe vehicle.....	Martz, C. William, approximating
guidance perturbations for low-	vacuum motions of spinning
thrust orbiter mission using	symmetrical bodies with non-
Snap-8.....	constant spin rates.....
natural and induced environments	Martz, Helen E., water resources and
encountered in interplanetary	pollution control.....
space and methods of simula-	Marx, Karl: anniversary of death, North Viet-
tion, investigation.....	nam talk on creative Marxism.....
observation of USSR during great	
opposition of 1956, results.....	
physical conditions.....	

# JANUARY-DECEMBER

	Entry		Entry
Marx, Karl—Continued		Massachusetts:	
criticism of method of vulgar economics and its realistic significance, Communist China.....	5273	county business patterns, activities covered by OASDI program.....	11614
evaluation on 80th anniversary of death, Vietnamese editorial.....	8989	errata.....	18669
political economy and bourgeois classical political economy, Communist China study.....	5213	electric rate book.....	13918
Marxism, see Communism.		landings, fishery products.....	3888
Marxist political economy and bourgeois classical political economy, Communist China study.....	5213	by gear and subarea, annual summary, 1962.....	17444
Maryland:		by ports, annual summary, 1962.....	15515
aging citizens, educational needs, conference report.....	20249	mineral industry, minerals yearbook chapter.....	20958
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics.....	4568	population, 1960, characteristics.....	15045
climatological data.....	3517	public school finance program, 1961-62.....	19112
community economic redevelopment programs, case studies.....	16817	roads and highways, right-of-way acquisition practices, report.....	15258
costs of operating exempt for-hire motor carriers of agricultural commodities, pilot study.....	8152	women, legal status.....	3404
county business patterns, activities covered by OASDI program.....	15051	women workers, 1960.....	21180
firefighting agreements with D.C., amend act, report.....	7976	ZIP code directory.....	20045
landings, fish and shellfish.....	3887	Mastenbrook, H. J., vertical distribution of water vapor over Hyderabad, India, etc.....	12951
annual summary, 1962.....	19222	Masterson, James R., writings on American history, 1955.....	16813, 17058
population, 1960, characteristics.....	18653	Masts and rigging, moving rigging, engineered performance standards, handbook.....	1609
precipitation data, hourly.....	3771	Masucci, Robert H., income parity standards for agriculture.....	2129
redevelopment area, 5B, statistical profile.....	9790	Matalas, Nicholas C.: autocorrelation of rainfall and streamflow minimums.....	6557
southern, 7-year results in managing small woodlot.....	20703	low flow probability distribution, analysis.....	10293
weather stations, decadal census.....	16673	statistics of runoff-precipitation relation.....	607
ZIP code directory.....	20044	Material Inspection Services: administration manual.....	9301
Maryland tobacco, see Tobacco.		Navy contract termination and inventory disposition, manual.....	7373
Masers, Polish research scientist, biography.....	8823	Materialism: question of materialistic social psychology, USSR study.....	12378
Masks, see Oxygen masks.		USSR chemistry courses for developing in students dialectic-materialistic world outlook.....	17580
Mason, Charles M., bullet sensitivity of ammonium nitrate-fuel oil mixtures.....	10945	Materials: aircraft—	
Mason, E. A., irradiation loop studies of organic reactor coolants.....	14991	charring, influence of heating rate and test stream oxygen content on insulation efficiency.....	14573
Mason, Elizabeth G., relief.....	7904, 17239, 18789	metallic materials and elements for flight vehicle structures, military handbook.....	12037
Mason, Horatio C., controlling drosophila flies on tomatoes.....	25	research, progress report.....	12875
Mason, R. M., programming glossary for NAREC users.....	11155	atomic—	
Masonich, Nick, relief.....	15221	AEC and contractors management symposium.....	16859
Masonry:		engineering materials, lists.....	133, 16857
construction for buildings, engineering and design, manual.....	19142	nuclear fuels and materials development.....	7711
engineered performance standards—		nuclear, private ownership, hearings.....	18790
formulas.....	9519	nuclear rocket applications, advanced research.....	4491
handbook.....	11420	testing, Soviet use of balloons.....	16054
Mass (physics):		automobile interior and convertible tops, used in 1961.....	3369
liquid propellant within space vehicle propellant tank subjected to zero gravity, determining.....	7259	brittle, true stress-strain properties to very high temperatures.....	9691
errata.....	12850	census of manufactures, 1958, selected materials consumed.....	5092
models for stars of very low mass.....	19922	Communist China, translations.....	650, 2578, 2608, 2640, 2790, 2835, 5376, 6688, 6737, 6938, 8457, 8530, 8596, 8618, 8668, 8843, 8982, 10448, 10498, 10527, 10689, 10739, 12387, 12396, 12679, 14183, 14242, 14247, 14360, 15753, 15900, 15988, 16091, 16117, 16158, 17757, 17787, 17905, 19384, 19492, 19558, 19603, 19699, 19758, 20795, 20890.
spectroscopy, methods and uses.....	1817		
Mass balance, unbalance, methods of expressing.....	11018		
Mass spectrometers, see Spectrometers.			
Mass spectroscopy, see Spectroscopy.			
Mass transfer:			
in turbulent flow through orifice of chamber.....	10457		
relationships among coefficients of turbulent moment, heat, and matter transfer in atmosphere.....	5188		
sodium, corrosion sample data 1962.....	18570		
turbulent, in liquid streams.....	11561		

# INDEX 1963

Entry	Entry
Materials—Continued	Materials—Continued
construction and building, USSR in-	vacuum insulation investigation up
dustry, translations-----	to 4000°F-----
8508, 10705, 10726, 15920	11472
DOSAAF, USSR military transla-	VBWR irradiation of reactor con-
tions-----	trol materials in tubes contain-
679	ing simulated defects-----
elastomeric, use in aerospace sys-	7093
tems, design data handbook---	see also Refractory materials--
4391	Strategic materials--also
fatigue behavior under strain	names of materials.
cycling-----	
9152	Materials Central-ASM metallurgical
granular, electrostatic separation---	educational lectures-----
7202	7592
heat-physical properties at high	Materials handling, equipment in-
temperatures, USSR study---	dustry, outlook for 1963 and
8856	review of 1962-----
heat-resistant--	4550
prepared from sintered aluminum	Maternal welfare, see Mothers.
powder, USSR study-----	Maternity, see Mothers.
17994	Mathematicians:
USSR works-----	Bulgaria, Lyubomir Chakalov bio-
5325	graphic information-----
industries, East European, transla-	12405
tions-----	Soviet, Lenin prize awards-----
659,	6801
719, 735, 822, 973, 1065,	Mathematics:
1131,	abstracts--
2505, 2573, 2603, 2774, 2964,	East European scientific and
2994, 5300-1, 5380, 6854, 6734,	technical journals--- 858, 1048, 1070
6934, 6987, 7042, 8471, 8531,	pertaining to Communist China
8622, 8745, 8794, 8950, 10371,	in Soviet journals----- 744, 854,
10442, 10493, 10525, 10659,	12417, 12672, 14349, 16006
10734, 10818, 12281, 12356,	aids for mathematics education (se-
12501, 12533, 12598, 12619,	ries)-----
14200, 14308, 15705, 15718,	358
15863, 15901, 15980, 17578,	algorithms--
17881, 17945, 18001, 19559,	associated with word systems,
19664, 19733, 20894.	USSR study-----
metallic fuel element, technical re-	12701
port, General Electric direct-	construction of simulating pro-
air-cycle, aircraft nuclear	duction process, USSR study---
propulsion program-----	for solving large systems of nor-
121	mal equations by means of
missile and space vehicle struc-	multi-group method on elec-
tures, recommendations and	tronic computer, USSR study---
evaluations of research areas---	1085
21007	applied multiple linear regression---
nuclear, see, above, atomic.	13213
plastic, defense, engineering, speci-	asymptotic expansions for singular
fications and standards-----	perturbation problems, applica-
15409	tion to viscous flow over flat
preservation, packaging, and pack-	plate-----
ing, Federal test method	14572
standard-----	asymptotic solution to nonlinear
13943	differential equation of 3d or-
properties of solids at low tempera-	der with N. N. Bogolyubov
ture-----	method-----
11515	3168
properties, USSR studies-----	controlling mathematical machine
2665	"Stal" I", USSR study-----
radioactive--	15978
international traffic (remarks)---	degrees earned, 1949-60-----
9697	17305
shipping and storage, literature	East European journals, abstracts.
search-----	2597,
18588	2757, 2730, 2812, 2877, 2949,
reactor--	5278, 5421, 6639, 6715, 6798,
corrosion, articles-----	6912, 7087, 8685, 8777, 8885,
1818	10430, 10455, 10467, 10608,
mechanical properties-----	10714, 10798, 10866, 12303,
14907	12419, 12526, 12665, 14108,
review of recent developments---	14329, 14333, 14371, 15698,
4134	15874, 16007, 16142, 17717,
structural, neutron irradiation	17856, 17986, 19541, 19646,
effect on brittle-rupture prop-	19722, 20837, 20886.
erties-----	elementary school--
9690	library, recent titles for, selected
research abstracts, Air Force re-	bibliography-----
search and development-----	358
60	new directions-----
research chronology, 1917-57---	17370
61	Federal financial assistance for
research, perspectives-----	strengthening instruction in
11151	public schools, regulations---
satellite, optical properties-----	19099
9149	guidelines-----
errata-----	20634
19905	freshman, entering levels and col-
sciences, Charles J. Cleary award	lege courses-----
papers-----	17371
57	functions--
Serbian examination institute, Yu-	depth sound speed profile with
goslav study-----	continuous 1st derivative for
15785	use in ray acoustical model---
spacecraft, selection for space op-	11178
erations, papers-----	higher order systems, method of
7236	synthesizing-----
structural--	11171
columbium-hafnium binary alloys	structure with limited spectrum,
for use at elevated tempera-	etc., in communications theory,
tures-----	USSR study-----
1240	8869
for avalanche control in starting	graduate training grants-----
zone, guidelines for planning	3260
and design of permanent sup-	linguistics, Rumanian studies----
porting structures-----	8525,
4990	10762
tensile and impact properties at	
temperatures from 20 to 300°	
K-----	
14598	
survey series-----	
5469	
tested as insect attractants-----	
14851	
useful in microwave tube design,	
manual-----	
1780	



	Entry		Entry
Mathematics—Continued		Mathisen, Ole A., photographic census of Steller sea lion herds in Alaska, 1956-58	13973
mathematical statistics research at Aeronautical Research Laboratories, history	4400	Matigian, Michael H., sandwich construction bibliography	9316
mathematics and computers, practical application, Rumanian study	17948	Matlack, E. Brooke, Inc., motor vehicle accident	5106
mathematics and data processing, Rumanian study	10441	Matoush, Le Roy O., aspartic acid salts evaluation as anti-fatigue drugs effects on rats and dogs	7686
mathematics and mathematical physics, Journal of research, National Board of Standards	3816, 9204, 18188	Matranga, Gene J.: approach and landing investigation at lift-drag ratios of 3 to 4 utilizing delta-wing interceptor airplane	10997
methods for processing statistical data, USSR study	8697	handling qualities, etc., for terminal lunar landing	16396
modern, and your child, methods of presentation, etc.	15434	Matrices (mathematics): transition assumptions in circum-lunar navigation	20980
obtaining complex algorithm by combining simple algorithms	2808	MATS, see Military Air Transport Service	
principles of accomplishing learning and logical processes in automatic equipment, East German study	10835	Mats, airplane landing, experimental T 11 aluminum, engineering tests	20653
programs of advanced standing radial mathieu functions, tables	19110	Matthews, Clarence W., motion of idealized plasma ring through travelling-magnetic-wave plasma accelerators	11031
errata	84 4397	Matthews, Earle D.: soil survey—Dorchester County, Md. Washington County, Md.	16565 13055
scientific tests, standards, publication, price list	18281	Matthews, Ruth H., baked products, consumer quality, etc.	14860
superior undergraduate students, honors programs	19102	Mattoon, Ill., redevelopment area, statistical profile	7812
tables—		Mattresses: current industrial reports	3574, 13293
blackbody radiation function for wavenumber calculations	1739	recommendation of trade	4555
eccentric and true anomaly in elliptic orbits	11091	Mattresses (hydraulic engineering): articulated concrete, aluminum-coated wires as reinforcement	4875
ferrimagnetic resonance linewidth of non-metallic magnetic materials	9215	Mattson, Chester R., chum salmon resources of Alaska	4970
integral of circular bivariate normal frequency function	14502	Mauch, James, education joins housing and welfare in coordinated Federal effort	12058
teachers—		Maul, electric facilities of area, map, Maumee River: basin, flood control, engineer report—departmental edition	523 19145
high school, report of survey	8177	document edition	18809
public high school, basic information	17393	Mauna Loa Observatory, atmospheric electric measurement results	5771
secondary school, characteristics and service loads	9252	Mauritania: decrees on army and national gendarmery	6970
teachers institutes—		economy, basic data	6594
academic year 1963-64	1359	investment law	5069
in-service, 1963-64	11129	newly independent nation, fact sheet	11290
summer institutes and conferences	1363	preparing shipments to	5079
summer, secondary school, 1963	3198	Maurus, Edward J., relief	18819
teaching machines and programed materials	2172	Maxwell, Richard S.: preliminary inventory of records of—Office of Territories	12892
teaching, summary and analysis of research, 1959-60	10061	Office of U.S. High Commissioner to Philippine Islands	7306
UDOFTT procedures	7366	May, Irving, strontium sorption studies on crandallite	8333
USSR and Chinese articles, English abstracts	3621	Mayberry Levee District, Ark.: flood control, engineer report—departmental edition	464 270
USSR, scientific abstracts	12767, 15672, 17808, 19683	document edition	
see also Coefficients.		Maycock, Paul D., thermal diffusivity measurements on finite disk	124
Mathematics Institute, Academy of Sciences, Poland, scientific activities of integral equations section	8446	Mayes, William H., noise measurements during captive and launch firings of large rocket-powered vehicle	1298
Mather, Bryant, partially compacted weight of concrete as measure of workability, tests of large-aggregate concrete, investigation	19152	Maylor, Peter H., relief	11941, 13409, 13487
Mather, J. Warren: handbook on major regional cooperatives handling farm production supplies, 1960 and 1961	4877		
regional cooperatives handling under \$10 million of supplies, 1960-61	15463		
Mathews, John H., field reversals of paleomagnetic type in coupled disk dynamos	11189		
Mathews County, Va., soil survey	1504		
Mathieu functions, radial tables, functions of 1st kind	84		
errata	4397		

# INDEX 1963

	Entry		Entry
Maynard, Mass., ground-water geology and hydrology of area.....	2354	Meat:	
Mayo, Alton P., equations for determining vehicle position in earth-moon space from simultaneous onboard optical measurements.....	5596	exporting to various countries, Meat Inspection Division regulations, appendix.....	11430
Mayo, Edward, E., static longitudinal stability characteristics of blunted gliders reentry configuration.....	11000	foreign agriculture circulars.....	3720
Mayo, F. R., polymerization and copolymerization of unsaturated fatty acids and their esters.....	16714	foreign trade, prospects.....	4978
Mayo, Leonard W., mental retardation, report of President's Panel.....	6572	freeze dried, methods for reconstruction.....	20120
Mayo Lykes (SS):		fresh, centralized processing for retail stores.....	18435
launching ceremonies at Bethlehem Sparrows Point (remarks)....	16312	home canning directions.....	18423
Mayonnaise:		industry—	
and related products, 1962.....	16871	Argentina.....	15543
current industrial reports.....	11628	France.....	6477
definitions and standards of identity.....	12144	outlook for 1963 and review of 1962.....	5967
amendment.....	12143	Texas-Oklahoma, structure, etc.....	12044
MB series.....	9478	Uruguay.....	15544
Mead, Margaret, creative life for your children.....	4597	West Germany.....	6478
Mead, Robert L., power from isotopes.....	20336	Inspection—	
Mead, Lake:		procedures manual.....	18410
filling and operation.....	8020	types of tumors found by Federal inspectors in 8-year survey.....	9554
forecast of inflow.....	3825	Institutional purchase specifications approved by USDA, pork products, cured and processed.....	16706
geologic reconnaissance between Lake Mead and Davis Dam.....	15610	Livestock and meat situation.....	3873
water supply outlook and forecast of inflow.....	3825	market news weekly summary and statistics.....	3874
Meade, George G., Fort, impairment of combat readiness of combat unit from lack of repair parts, GAO report.....	15592	meal, production.....	7461, 16616
Meadow mice, <i>see</i> Mice.		meat miracle, abundance and quality of U.S. supply.....	14874
Meadows:		production—	
Colorado mountain-meadow cattle ranches, forage programs, etc.....	8147	monthly report.....	3528
improving mountain meadow production in West.....	1685	United States, by months.....	11335
North China.....	15708	statistics, 1962.....	14893
Meadows-Reed, Edith, mass spectrometric investigations of atmosphere over Wallops Island.....	16387	<i>see also</i> Packing Industry—Pemmican.	
Meal:		Meat animals, <i>see</i> Livestock.	
meat, production.....	7461, 16616	Meat Inspection Division:	
oil, processing, Northern Regional Research Laboratory, publications list.....	5794	activities, summary, 1963.....	18406
Mean electron density variations of quiet ionosphere.....	11098-99, 19952	facilities and equipment fact sheet (series).....	13158-159
Measles, vaccines, status, technical report.....	9355	regulations, special requirements for exporting products to various countries, appendix.....	11430
Measurements:		Meat inspectors, Federal, types of tumors found in 8-year survey.....	9554
aerological, Soviet methods, translation.....	2524	Meat packing plants, <i>see</i> Packing industry.	
state vector.....	1316	Mechanical and physical hazards series.....	1156
Measuring effects of weather on agricultural output.....	2125	Mechanical behavior of crystalline solids, proceedings of symposium, Apr. 28-29, 1962.....	9207
Measuring instruments:		Mechanical brains, <i>see</i> Cybernetics.	
East European, Polish study.....	8610	Mechanical fans:	
Federal item identification guides for supply cataloging, supplements.....	3653	current industrial reports.....	3575
for 2-frequency inductive electroprospecting, USSR.....	12355	1962, summary.....	7754
weighing and measuring instruments, specifications, etc.....	18184	high disk-loading, mounted in wing, aerodynamic characteristics.....	5602
<i>see also</i> Dilatometers—Electronic measuring instruments.		industry outlook for 1963 and review of 1962.....	4532
Measuring metropolitan markets, guide to use of U.S. Government data.....	9705	Mechanical impedance study of X-259 rocket motor.....	14549
Measuring tools, <i>see</i> Measuring instruments.		Mechanical power transmission, <i>see</i> Power transmission.	
		Mechanical properties of high-manganese semikilled steel plate.....	9379
		Mechanical properties of welded aluminum-magnesium alloy plates.....	20013
		Mechanical technology, design and production, suggested 2 year post high school curriculum.....	2163
		Mechanical thumb for measuring firmness of fruits.....	11456
		Mechanics (persons):	
		airframe and powerplant, examination guide.....	15539
		aviation mechanics with inspection authorization, handbook.....	17425
		aviation structural mechanic S 1 & C, Navy training course.....	9264

# JANUARY-DECEMBER

	Entry		Entry
Mechanics (persons)—Continued		Medical care—Continued	
job opportunities-----	20937	citizens of U.S., Federal Govern-	
machinery repairmen 3 & 2, Navy		ment's role in providing-----	17195
training course-----	1368	Coast and Geodetic Survey retired	
Mechanics (science):		personnel—	
abstracts pertaining to Communist		law-----	15150
China in Soviet journals-----	987,	reports-----	11828, 11967
physics and mechanics of snow as	10481	comprehensive, community medi-	
material-----	2190	cine, American concept-----	12986
Poland, translations from Me-		District of Columbia program for	
chanik-----	8610	the aged, delay in development	
Rumanian Academy, Institute of		and implementation, GAO re-	
Applied Mechanics, research ac-		view-----	13993
tivities-----	18010	emergency health care, family guide,	
Mechanism of intracranial circula-		excerpts, 1963-64 national high	
tion-----	9194	school debate on medicare	
Mechanism of venous outflow from		print as Senate document, re-	
cranium-----	11085	ports-----	13698, 17130
Mechanization:		expenditures, public and private,	
agriculture-----		1928-63-----	20136
important problems-----	20791	facilities construction grants, 1962	
problems of speed, USSR study		funds-----	11109
fish industry, urgent task, USSR		facility projects approved for Fed-	
study-----	10472	eral aid under Hill-Burton pro-	
logical net for time-optimal regu-		gram, register-----	3768
lation-----	3158	family expenditures, development of	
Post Office Department, report-----	5673	questionnaire-----	14674
statistics and bookkeeping prob-		financing and utilization source	
lems, USSR studies-----	16083	book of data through 1961-----	5685
Mecklenburg, Germany, structure of		fishing boat owners, restore eli-	
rural property and population,		gibility-----	
East Germany study-----	8909	hearings-----	12011
Medal of Honor:		report-----	11964
award to members of Armed Forces		Infantry, airborne, mechanized, and	
for gallantry in cold war in-		armored divisions, field manual,	
cidents-----		change-----	18543
hearing-----	13638	medical self-help training for you	
law-----	15156	and your community-----	21089
reports-----	13537, 13775	medical service, help for disabled	
Medals:		through vocational rehabilita-	
anniversary of birth of Padre Jun-		tion-----	9484
pero Serra-----		outpatient, for Philippine veterans,	
law-----	18784	extend program-----	
report-----	13728, 18849	hearing-----	8126
commemorative-----		law-----	13414
admission of Indiana, report-----	18847	reports-----	6140, 11960
admission of Nevada-----		persons 65 and over, estimated	
law-----	20430	expenditures-----	7431
reports-----	13727, 18851	Philippine veterans, agreement with	
150th anniversary of Battle of		Philippines-----	16600
Lake Erie, reports-----	13751, 18850	plans records, use in estimating oc-	
legislation, hearing-----	11887	cupational hazards-----	9339
International Ladies' Garment		prebed care in VA hospitals, report,	
Workers' Union health center		Feb.-May 1962-----	18961
anniversary, report-----	18848	public assistance, guides, etc.—	
North Vietnam military unit cita-		dental services-----	8200
tions awarded in 1962-----	17781	optical services-----	8261
see also names of medals, or per-		organization and administration-----	8202
sons to whom medals are to be		pharmaceutical services-----	13891
presented.		treatment of calisson disease, trans-	
Medford, Oreg., Municipal Airport,		lations from Russian book-----	12680
weather observations, hourly,		uniformed services, personnel de-	
summary, decennial census of		pendents, annual report-----	18560
climate-----	14791	USSR—	
Mediators, Federal Mediation and		organization of medical treat-	
Conciliation Service, employ-		ment for injuries-----	5194
ment opportunities-----	12113	treatment for all on dispensary	
Medical Aid to Cuba Committee:		level, study-----	17944
activities, hearings-----	4759	veterans—	
print additional copies, reports-----	11862, 13772	1870-1960, bibliography-----	9479
Medical and biological aspects of		intermediate and nursing home	
USSR space flights-----	761	care-----	
Medical aspects of radiation acci-		hearings-----	15334
dents-----	11589	report-----	15291
Medical bulletin, Medicine and Sur-		Medical certificates, reviewing and	
gery Dept., VA-----	9478	acting on, FPM manual supple-	
Medical care:		ment-----	16948
aged persons, Kerr-Mills program,		Medical College of Georgia:	
evaluation report-----	20603	orthicon image assembly, duty-free	
better care through better use of		entry-----	
nursing personnel skills (ad-		law-----	19013
dress)-----	21079	reports-----	13549, 15348
		Medical corpsman, Army technical	
		manual-----	11542

# INDEX 1963

Entry	Entry
Medical Department, Army:	Medical schools:
internal medicine in World War II,	expand facilities and program for
infectious diseases..... 9666	training—
organization and administration in	hearings..... 6199, 17326
World War II..... 11550	law..... 18776
personnel in World War II, history	summary..... 19335
preventive medicine in World	reports..... 6180, 7945, 17283
War II..... 11551	Medical service, <i>see</i> Medical care.
surgery in World War II..... 5920	Medical Service Bureau, Public
Medical Department, Navy:	Health Service, career oppor-
ensign medical program..... 9098	tunities, 1964..... 20092
independent duty hospital corps-	Medical Service Corps, Army, career
man..... 10934	opportunities for graduate stu-
manual..... 16316	dents in clinical psychology..... 117
support to Fleet Marine Force..... 7187	Medical specialists:
Medical education, <i>see</i> Medicine.	Army technical manual..... 11542
Medical examinations, <i>see</i> Physical	health manpower source book..... 1407
examinations.	Medical supplies, Federal item iden-
Medical examiners:	tification guides for supply
aviation, guide..... 9701	cataloging, supplements..... 3657
aviation, list..... 13254	Medical technicians, operating room,
Medical facilities, <i>see</i> Hospitals.	Air Force pamphlet..... 18461
Medical facilities survey and construc-	Medical technologists, health research,
tion act of 1954, <i>see</i> Hospitals.	NIH, examination announce-
Medical gazette (USSR periodical):	ment..... 15114
translations..... 12580	Medical treatment, <i>see</i> Medical care.
Medical industry (USSR periodical):	Medical zoology, <i>see</i> Zoology.
translations..... 1075, 7094	Medicare, <i>see</i> Medical care.
Medical installations, <i>see</i> Veterans	Medicine:
hospitals.	aerolins and their use, USSR study..... 871
Medical instruments and apparatus:	aeromedical reviews..... 4409, 5884-87,
fake medical devices, FDA reports,	7628, 16788-789, 18499, 20309
20690	aerospace—
Federal item identification guides	bibliography..... 9084
for supply cataloging, supple-	decompression sickness studies..... 9630
ments..... 3657	lectures..... 16780
organizational maintenance, techni-	Aerospace Medical Research Lab-
cal manual, changes..... 1809	oratories, technical documen-
Medical internships in Public Health	tary reports..... 7604, 11477, 20301
Service..... 20107	archives of internal medicine
Medical laboratories:	(USSR periodical), transla-
medical mycology manual..... 11241	tions..... 935
techniques and procedures..... 18060	Arctic, symposia..... 18489
techniques used in control of anti-	aviation—
coagulant therapy, manual..... 16511	drug hazards, guide..... 13253
Medical literature:	outlines on history, USSR study..... 10826
translations, Jan. 1959-June 1962..... 9232	Azerbaijdzhan medical journal..... 3004
VA Medical Research Conference,	bibliography of medical reviews..... 12912
abstracts..... 1581	Bulgaria, planned development of
Medical literature analysis and retriev-	science and education..... 2989
al system, MEDLARS	civil aeromedical research, respon-
story at National Library of	sibilities, aims, and accomplish-
Medicine..... 11242	ments..... 4505
Medical mycology:	clinical, USSR, translations..... 9836
clinical laboratory procedures..... 9267	Communist China, new research..... 16251
laboratory manual..... 11241	community, American concept of
Medical Nutrition Laboratory, <i>see</i>	comprehensive care..... 12986
Army Medical Research and	Council for Planning and Coordi-
Nutrition Laboratory.	nation of Medical Science, or-
Medical officers:	der concerning, East Germany..... 12308
examination announcement..... 16954	cybernetics, USSR study..... 2945
amendment..... 6026	Czechoslovakia, activities..... 7008
discontinuance notice..... 16944	East European journals, abstracts..... 778,
Medical practice (USSR periodical):	964, 1027, 1092, 2542, 2613,
translations..... 1012	2675, 2727, 2753, 2777, 2875,
Medical radiology:	2950, 5173, 5207, 5243, 5277,
clinical dosimetry, recommenda-	5309, 6637B, 6672, 6699, 6711,
tions of international commis-	6796, 6881, 6981, 7088, 8475,
sion..... 16417	8479, 8522, 8609, 8615, 8775,
field, USSR studies..... 19516	8846, 8962, 10419, 10454, 10466,
personnel, USSR training..... 852	10536, 10547, 10610, 10677,
USSR periodical, translations..... 776,	10720, 10764, 10795-796, 10868,
5284, 6742, 10605, 16154	12298, 12300, 12555, 12558-560,
Medical records:	12579, 12664, 12670, 12684-686,
hospital—	12740, 12744, 12747, 14109,
criteria for administrative eval-	14227, 14258, 14291, 14327,
uation..... 16506	14334, 14370, 14375, 15696,
disease classification..... 3289-90	15714, 15877, 16014, 16140,
Medical research, <i>see</i> Medicine.	16162, 16166, 16201, 16219,
Medical Research Laboratory, <i>see</i>	17590, 17598, 17617, 17621,
Naval Medical Research Lab-	17639, 17692, 17791, 17824,
oratory.	17837, 17897, 17942, 17954,
	19428-429, 19540, 19585, 19604,
	19623, 19705, 19725, 19747,
	19771, 20794, 20840.

	Entry
<b>Medicine—Continued</b>	
electronics and medicine, USSR	17910
study	14662
film reference guide	4314
future international meetings,	
world list	4314
<b>Hungary—</b>	
Biological and Medical Sciences	
Division, Academy of Sciences,	
activities	6760
medical documentation	15992
medical science	2933
index medicus	3776
internal, in World War II, infec-	
tious diseases	9666
medical and health related sciences,	
thesaurus	12998
medical bulletin	9478
medical consultants in State voca-	
tional rehabilitation program,	
handbook	9482
medical developments in North Vi-	
etnam	2908
medical libraries outside U.S. and	
Canada, directory	12913
medical newsletters—	
Aviation Medical Service	3891
Medicine and Surgery Bureau	3890
medical research—	
Federal expenditures, 1947-64	19970
foundation expenditures, 1960	3178
Veterans Administration—	
indemnification of research	
contractors, report	18862
report	4980
medical science publication	116
medical subject headings	3776
medical supervision, 5th all-Russian	
scientific-practical confer-	
ence	20825
modern, experiments on human	
beings, USSR study	19710
National Library of Medicine—	
catalog, 1962	12815
services, etc	7322
subject headings	3892
naval, preventive, manual	9097, 19819
<b>Navy—</b>	
enlist medical program	9098
statistics—	
annual 1961	18061
quarterly highlights	4210
nursing homes, professional person-	
nel (address)	18291
physical medicine, step into action,	
guidebook for above-knee ampu-	
tees	9356
preventive, in World War II	11551
problems of medical chemistry	
(USSR periodical), transla-	
tions	2764
quackery involving mails, Post	
Office Dept. program to meet	
problem (remarks)	20023
radioactivity in diagnosis and	
treatment, USSR studies	19582
radioelectronics application, USSR	
conference	2467
research, manpower requirements	
and resources, 1965-70	7317
resources for medical research re-	
ports	3178, 7317, 19970
role of pharmacology in develop-	
ment, USSR study	20804
School of Aerospace Medicine—	
research report	68
technical documentary reports	69-83,
1775, 4410-23, 5888-92, 7629-40,	
9028-34, 11514, 13214-218,	
14917-922, 16790-808, 18500-	
507, 20310-313.	
space—	
digital readout technic for mon-	
itoring physiologic data	7635

	Entry
<b>Medicine—Continued</b>	
<b>space—Continued</b>	
man in space flight, USSR	
study	17615
neural control of ciliary mus-	
cle	15022
steroid and catecholamine	
studies	16807
USSR studies	10686, 20878
submarine, problems experienced	
with atmospheres	7188
teaching aids composed of lantern	
and microscopic slide sets	18549
television microscopy, USSR study	8658
<b>USSR—</b>	
Academy of Medical Sciences,	
herald, translations	2590,
6794, 6994, 8511, 10643, 10675,	
12682, 16224, 17768, 19530,	
20818.	
activities	7008, 19607
development, importance of sci-	
entific research	12576
great medical encyclopedia,	
translations	5168, 5371, 8620, 8773
industry, small-scale production	
units, studies	17577
institutions, activities	17799
medical education, development,	
1962	5399
medical industry, training of	
engineering personnel	19639
medical sciences	2638, 2707
problems	12465
problems of higher medical edu-	
cation	999
progress, etc	2639
scientific abstracts	14280,
15814, 17587, 17933	
studies	8897
technical aid abroad in develop-	
ing industries	19727, 20826
translations	1012,
5348, 5372, 10744,	
12580	
urban medical districts, prob-	
lems of organization, etc	17935
VA Medical Research Conference,	
abstracts	1581
see also Nuclear medicine.	
Medicine and Surgery Bureau (Navy),	
Defense Dept., report, 1961	18061
Medicine and Surgery Department,	
Veterans Administration:	
Chief Medical Director—	
appoint—	
law	11710
report	9973
authority to act on recommen-	
dations of disciplinary boards,	
report	15290
medical bulletin	9478
Medicine Bow National Forest, Pole	
Mountain district, retrocede	
jurisdiction to Wyoming, re-	
port	13719
Medicine Bureau, Food and Drug Ad-	
ministration, drug policies, in-	
teragency coordination, hear-	
ings	19054
Medicines:	
Bulgaria, new instructions govern-	
ing testing	8468
new, determining volume of pro-	
duction in USSR	19638
see also Drugs.	
Medico-biological control in cosmic	
flight, USSR	739
Mediterranean Sea:	
contributions to hydrology of Afri-	
ca and Mediterranean region	
(series)	14037
heterotrophic bacteria of basin, dis-	
tribution, USSR study	17735
lights and fog signals, list	11140
notice to mariners	3973



# INDEX 1963

Entry	Entry
Mediterranean Sea—Continued	Memorandums, <i>see</i> names of depart-
radio navigational aids..... 7354, 14622	ments, etc., issuing memoran-
radio weather aids..... 21054	dums.
sailing directions, changes..... 7350, 16450	Memorial services:
tide tables..... 9255, 11674	Case, Francis H..... 206
Meditinskaya gazeta (periodical):	Chavez, Dennis..... 16969
translations..... 12580	Dworshak, Henry C..... 1963, 9797
Meditinskaya promyshlennost (peri-	Kerr, Robert S..... 18767
odical):	McGranery, James P..... 20453
translations..... 1075, 7094	Miller, Clement W..... 1962
Meditinskaya radiologiya (peri-	Memorials, <i>see</i> National monuments
odical):	and memorials— <i>also</i> names
translations 776, 5284, 6742, 10605, 16154	of memorials— <i>also</i> names of
Medland, Francis F., selection of	persons to who memorials
NCO leaders..... 4466	are erected.
MEDLARS, <i>see</i> Medical literature	Memphis, Tenn.:
analysis and retrieval system.	Board of Trade Clearing Associa-
Mee, T. R., Jr., whiteout seeding	tion, futures trading and open
procedures..... 19134	contracts in soybean meal and
Megerth, F. H., VBWR irradiation of	cottonseed meal..... 3751
reactor control materials in	electric facilities of area
tubes containing simulated de-	map..... 522, 2266
fects..... 7693	immunization status of 2-year
Meggers, Betty J., aboriginal cul-	olds..... 16509
tural development in Latin	income, education, and unemploy-
America..... 14695	ment in neighborhoods..... 10914
Meggins, Leon C., providing man-	occupational wage survey—
agement talent for small busi-	departmental edition..... 10900
ness..... 1458	document edition..... 9821
Mehren, George L.:	Memphis lock and dam:
addresses, etc.—	change name—
Sept. 16, 1963..... 20290	law..... 18783
Sept. 23, 1963..... 20279	reports..... 13704, 18860
Sept. 26, 1963..... 20280-281	Men:
Meknes Province, Morocco, demo-	middle-aged, response to one-hour
graphic, geographic and eco-	oral glucose tolerance test... 16537
nomie data..... 5299	mortality, ages 20-64—
Melan Bridge, costs, improper in-	by industry and cause of death... 20114
clusion in Keyway slum clear-	by occupation level and cause of
ance and urban renewal proj-	death..... 20113, 20115
ect, Topeka, Kans., by Urban	physical fitness program..... 16488
Renewal Administration, GAO	working life, length of, 1900-60... 14437
report..... 20716	working life table, 1960..... 14483
Melanotic tumors of skin..... 6312	Menhaden:
Melfi, Leonard T., Jr., use of ioniza-	distribution of fishing by purse seine
tion gage as quantitative an-	vessels, Atlantic, 1955-59... 8281
alyzer for Bi-gaseous mix-	juvenile Atlantic, variation in ver-
tures..... 3155	tebral numbers..... 10201
Mellor, Malcolm, oversnow trans-	Men's clothing, <i>see</i> Clothing— <i>also</i>
port..... 19138	names of clothing.
Melon fly, <i>see</i> Flies.	Mental defectives, <i>see</i> Mentally ill—
Melons:	Mentally retarded.
commercial production for fresh	Mental diseases:
market and processing, 1959-	care, treatment, etc., of mentally ill
62..... 9451	in D.C., hearings..... 17320
spring, acreage marketing guides... 2	veterans, service-connected psy-
summer, acreage marketing guides... 5780	chosis and psychoneurosis, em-
Melting:	ployment adjustment..... 11372
and transformation temperatures of	Mental disorders, <i>see</i> Mental illness.
minerals, etc..... 19295	Mental health:
vacuum arc melting and casting	activities, and development of com-
of copper..... 14519	prehensive community pro-
Melting point:	grams, report..... 9224
comparison of 2 melting-pressure	advanced readings..... 12907
equations constrained to triple	career development program in
point using data for 11 gases	psychiatry, Public Health Ser-
and 3 metals..... 21028	vice..... 9220
metal oxides, compilation..... 19951	facilities, design, bibliography... 3288
Melton, Carlton E., Jr., neural con-	followup project, report..... 12040
trol of ciliary muscle..... 15022	hearings..... 11908
Melton, Curits, Jr., relief..... 13524, 19005, 20422	manpower studies program..... 11105
Melville, George S., Jr., protection	monograph series..... 14606, 19966
against ionizing radiation... 4412	nursing home residents, environ-
Member banks, <i>see</i> Federal reserve	mental implications..... 13000
member banks.	personnel, training, survey of fund-
Membranes:	ing and expenditures, 1960-61
amniotic, use in treatment of ther-	summary..... 12908
mal skin burns in children,	programs, highlights of develop-
USSR study..... 15739	ments, 1962..... 19965
arrest of moving mass attached to	project grants, NIMH program... 19967
strip, analysis..... 14578	public opinions and attitudes... 19968
prefabricated airfield and road	State salary ranges..... 616, 10305, 19340
surfacing investigation..... 2228	training grant awards, Public
	Health Service, 1962 funds... 9228

# JANUARY-DECEMBER

	Entry
Mental illness:	
mental disorders of the aging.....	11243
psychiatric disorders, treatment with metrazol, bibliography....	16517
Mental institutions:	
mental hospital statistics, model reporting area.....	5623
patients, 1960.....	12906, 16425
private—	
mentally retarded, 1960.....	16425
patients, 1960.....	12906
psychiatric services, facilities, de- sign, bibliography.....	3288
public, patients, 1960.....	5625, 9226
Mental tests, <i>see</i> Factor analysis.	
Mentally ill:	
constitutional rights, care, treat- ment, hospitalization in D.C., hearings.....	17320
Loudoun County, Va., found on Federal reservations, commit to St. Elizabeths Hospital, report.....	13605
mental retardation facilities and community mental health cen- ters construction act of 1963—	
hearings.....	11908, 15318
law.....	20445
reports.....	11950, 17114, 17135, 18914
milieu rehabilitation.....	14768
national mental health program— hearings.....	6305, 11908
proposal.....	4723
national plan for national problem, chartbook.....	20080
outpatient clinics, demographic and psychiatric characteris- tics, 1961.....	16427
patients in veterans hospitals, fam- ily plays important part in treatment.....	1583
private hospitals, patients, 1960....	12906
public hospitals, 1960.....	5625
rehabilitation, 1960's, decade of advance.....	1585
renaissance of 1960's brings new hope (remarks).....	9042
statistics for mental hospitals, model reporting area.....	5623
veterans—	
job adjustment of psychiatri- cally disabled.....	9481
service-connected psychoses and psychoneuroses, employment adjustment.....	11372
Mentally retarded:	
adults, work evaluation and em- ployment preparation services, conference proceedings.....	3395
children—	
clinical program, listing.....	16914
education, leadership prepara- tion, graduate fellowship pro- gram.....	10071
guide to services of social agen- cies.....	13312
projects, role of social worker....	6010
report of Children's Bureau con- ference.....	16918
welfare, role in retardation (speech).....	18708
combat retardation through ma- ternal, etc., health programs—	
law.....	20437
reports.....	15275, 17118, 19017
Health, Education, and Welfare Dept.—	
activities concerned with retar- dation.....	19337
program, 1964.....	6571
job placement, guide.....	14448
mental retardation activities, neu- rological and sensory disease service program.....	20108

	Entry
Mentally retarded—Continued	
mental retardation facilities and community mental health cen- ters construction act of 1963— hearings.....	11908, 15318
law.....	20445
reports.....	11950, 17114, 17135, 18914
national action to combat mental retardation, proposed program, report to the President.....	5676
national mental health program— hearings.....	6305, 11908
proposal.....	4723
national plan for national prob- lem, chartbook.....	20080
President's Panel on Mental Retar- dation—	
report.....	6572
highlights.....	4598
implications for children, conference.....	16918
report of mission to Denmark and Sweden.....	14651
report of mission to Netherlands task force on education and re- habilitation, report.....	20082
task force on law, report.....	21074
prevention, clinical services and residential care, task force report.....	21075
private institutions, 1960.....	18273
proposed program to combat mental retardation.....	16425
public institutions, 1960.....	4598
rehabilitation-special education co- operation on prevocational programs, conference proceed- ings.....	9226
services of home economist to fam- ilies with mental retardation..	20225
voluntary admissions to Forest Haven, report.....	9732
<i>see also</i> Mentally ill.	17122
Mentzer, William R., stretch yo-yo de-spin system.....	19920
Mercapto compounds, 2-mercapto- ethylguanidine, distribution and chemical forms given orally in protective doses to mice.....	7637
Merced National Wildlife Refuge, gen- eral information.....	2295
Mercer, Charles E., performance of plug nozzle having concave central base with and without terminal fairings at transonic speeds.....	12877
Mercer, Walter A., industrial waste guide to fruit processing in- dustry.....	1410
Mercer County, W. Va., coal, prepa- ration characteristics.....	10960
Merchandise, <i>see</i> Commercial prod- ucts.	
Merchandising:	
largest firms, mergers and super- concentration, acquisitions, staff report.....	305
McIntosh apples, some effects on quality in New York City.....	4334
opportunities for U.S. abroad (ad- dress).....	9780
Merchant marine:	
act, amend—	
hearings.....	17177
reports.....	15255, 17272, 17284
act of 1920, continue authority for suspension of Jones act, report..	20573
act of 1936, amend—	
hearing.....	13708
report.....	19013
advertising awards presentation (remarks).....	8237

# INDEX 1963

	Entry		Entry
<b>Merchant marine—Continued</b>		<b>Merck, John W., retention of 1st enlistment alrmen, analysis results of mathematical simulation</b>	<b>1772</b>
American—		<b>Mercury:</b>	
maintaining and perpetuating (remarks)	10932	binary cycles for nuclear power plants, study	16860
protecting future through new versatile ships (remarks)	3049	influence of microstructural inclusions on friction and wear	11046
role in world trade (remarks)	10159	mineral industry survey, quarterly	3896
ships in foreign trade of U.S. (remarks)	10930	minerals yearbook chapter	14503
what will MarAd surface effect ship do (paper)	9095	poisoning, USSR research	15984
challenge of trade expansion program (remarks)	10157	Red Devil Quicksilver Mine, Alaska, removing and detoxifying, USSR research	15982
history of US Merchant Marine	5467	rhyolite mercury prospect, Kuskokwim River Basin, Alaska, trenching and sampling	3096
labor legislation, amend act, hearings	9942-43, 15323	<b>Mercury (planet):</b>	
licensed officers, career in Coast Guard	4638	radar probes, USSR study	8570
maritime industry's role in nation's financial programs (remarks)	11361	<b>Mercury arc lamps, see Electric lamps.</b>	
maritime matters—		<b>Meredith, Jane L., special labor force report, labor force and employment, 1960-62</b>	<b>16296</b>
operational arrangement for visit of N.S. Savannah, agreement with Netherlands	16582	<b>Meredith, Robert E., electrodeposition studies of molybdenum, tungsten, and vanadium in organic solvents</b>	<b>19873</b>
public liability for damage caused by N.S. Savannah, agreement with Netherlands	16581	<b>Mergers, see Business consolidations.</b>	
use of German territorial waters and ports by N.S. Savannah, agreement with Federal Republic of Germany	5736	<b>Merghetti, Maria, relief</b>	<b>18825</b>
maritime policies and problems (remarks)	18750	<b>Merit salary programs in 6 selected school districts</b>	<b>2164</b>
maritime resources for security and trade, Maritime Evaluation Committee, final report	15123	<b>Merit systems, State directory, 1963</b>	<b>15621</b>
maritime safety data for stevedoring	14449	<b>Meriwether Lewis Park, general information</b>	<b>12926</b>
miscellaneous legislation, hearings, officers, opportunity in Coast Guard	4758	<b>Merluccius bilinearis, see Hake.</b>	
ownership changes, etc., of vessels, supp	199	<b>Merrick, Gordon D., preliminary wood preservation statistics, 1962</b>	<b>12165</b>
problems and possibilities (remarks)	3927	<b>Merrick, Robert B., aborts from lunar mission</b>	<b>11039</b>
Russia's burgeoning maritime strength, staff study	10158	<b>Merrick, Samuel V., address, Sept. 23, 1963</b>	<b>18019</b>
specimen examinations—		<b>Merrick, Vernon K., control problems associated with earth-orbited satellites</b>	<b>14554</b>
deck officers	16961	<b>Merrill, Celine W., tale in U.S., bibliography</b>	<b>15607</b>
engineer licenses	16962	<b>Merritt Dam and Reservoir, general information</b>	<b>16548</b>
staff officers, classify professional nurses—		<b>Merryman, Lester B., low frequency narrow band pass active filter</b>	<b>11483</b>
law	18775	<b>Mersman, William A., critical inclination problem in satellite orbit theory</b>	<b>7302</b>
reports	11825, 17276	<b>Mesa, Millie G., relief</b>	<b>8033, 13483, 20395</b>
statistics, 1963	17337	<b>Mesa Verde National Park: boundaries, revise, report</b>	<b>18865</b>
vital role in national leadership (remarks)	10160	<b>general information</b>	<b>16436</b>
<i>see also Sailors—Shipping.</i>		<b>Mesabi Range, nonmagnetic taconites, metallurgical evaluation, etc.</b>	<b>1243</b>
<b>Merchant Marine Academy, Kings Point:</b>		<b>Mesnier, Glennon N., selected techniques in water resources investigations</b>	<b>10329</b>
alumni, chapter of New York port, role in shipping industry (remarks)	9094	<b>Mesoclimatic temperature differences in Fort Greely, Alaska, area</b>	<b>1436</b>
course of instruction	14488	<b>Mesosphere, wind observations from successive hourly rocket soundings</b>	<b>18451</b>
<b>Merchant Marine and Fisheries Committee, House:</b>		<b>Mesquite, control on southwestern rangeland</b>	<b>13171</b>
calendar	3840	<b>Messengers:</b>	
committee prints	18955-956	employment, under Fair labor standards act, code of Federal regulations	16652
hearings	207-209, 2056, 4756-58, 8101, 9942-44, 13664, 15323-325, 17177, 18954, 20501.	examination announcement	16941
investigations and studies—		<b>Messerly, John F., calorimetric method of purity measurement using IUPAC samples of benzene</b>	<b>16343</b>
authorization, report	6104	<b>Messee, ashore, Navy manual, change.</b>	<b>12943</b>
expenses, report	6129	<b>Metabolism:</b>	
reports	6115, 11823-826, 11828-829, 11835-836, 15244, 15254-255, 15262, 15268.	amino acid, effect of protein intake and cold exposure on liver enzymes associated with	11502
travel authorization, report	17153		
<b>Merchant Marine Council, proceedings</b>	<b>4109</b>		
<b>Merchant seamen, see Sailors.</b>			
<b>Merchant ships, see Ships.</b>			

	Entry		Entry
Metabolism—Continued		Metallurgy—Continued	
dietary conditioning for nutrient		applied research and development	
restriction in humans-----	1753	of conceptual design of U-233	
energy—		fuel refabrication plant-----	7703
changes in burn sickness, USSR		automation in continuous furnaces,	
study-----	19537	USSR study-----	17640
role in restoration of irradiated		dislocations, USSR reports-----	10570
cells, USSR study-----	20911	ferrous—	
fission products, research on phys-		fixed capital, amortization and	
ico-chemical state and meta-		capital repairs-----	5124
bolic path or radiocerium solu-		industries, air pollution by waste	
tion-----	4470	products, prevention, USSR--	7041
glucose one-hour oral tolerance		USSR industrial development,	
test-----	16537	translations-----	746
Husky dogs, seasonal variations---	14910	848, 920, 1010, 2458, 2679, 2685,	
irradiation and drug effects, USSR		2768, 2872, 2916, 2943, 5304,	
study-----	20764	5349, 6842, 7022, 7051, 7083,	
magnesium, temperature effects---	18471	8505, 8543, 8580, 8653, 8942,	
measurements on reindeer during		10426, 10480, 10496, 10512,	
rest and exercise-----	1751	10519, 10575, 10587, 10632,	
metabolic effects of methionine tox-		10651, 10678, 10830, 12286,	
icity in rat-----	18479	12454, 12509, 12554, 12703,	
mineral, effect of microquantities		12706, 12748, 14087, 14178,	
of stable strontium, USSR		14219, 14385, 15687, 15778,	
study-----	12716	15812, 15835, 15895, 15917,	
nuclein, in regeneration of skeletal		15938, 15957, 15970, 16094,	
musculature under roentgen		16131, 16167, 16178, 17614,	
irradiation, USSR study-----	17939	17698, 17713, 17743, 17764,	
phosphorus and iodine in deer---	18562	17798, 17831, 17844, 17972,	
protein, alterations during cold ac-		18008, 19572, 19608, 19621,	
climation-----	11501	19669, 19744,	
responses to cold of Peruvian In-		fundamental and applied research	
dians native to high altitude---	18478	and development-----	18582
thermal balance, maintaining in		high-pressure-high-temperature, re-	
man-----	11496	search and development-----	7649
Metal bars, see Bars (metal, etc.)		Industry, hydrocyclone operations,	
Metal containers, see Containers.		theory and practice, USSR	
Metal cutting, tools, shipments,		study-----	14261
1959-62-----	9706	metallurgical plants, level of mech-	
Metal foils, refractory rolling devel-		anization and automation, in-	
opment program-----	7627	adequate, USSR industrial de-	
Metal halides, vapor pressures, ref-		velopment-----	10651
erences with bibliography---	7206	Mines Bureau, Albany Metallurgy	
Metal mines and mining, safety or-		Research Center, progress re-	
ganization and activities of		ports-----	140, 9692, 11585,
award-winning companies-----	18076	nonferrous, USSR industrial devel-	
see also Mine accidents.		opment, translations-----	685,
Metal oxides, melting points, compila-		1052, 2628, 2666, 2907, 5158,	
tion-----	19951	5195, 5200, 5202, 5367, 6652,	
Metal shapes, see Shapes (metal).		6665, 6883, 7023, 7056, 8579,	
Metal sheeting, see Sheet metal.		8711, 8771, 8921, 10576, 10784,	
Metallic binders for zirconium diho-		12323, 12503, 12581, 12698,	
ride, iron, cobalt and nickel---	16334	14134, 14171, 14222, 14256,	
Metallic films:		15681, 15820, 15915, 16057,	
trimetallic film preparation by elec-		17628, 17706, 19576, 20781,	
trophoretic deposition-----	9595	20838,	
vacuum evaporated and cathode		USSR study-----	6809
sputtered thin films, research---	7646-	Philippine nickeliferous ores, Inves-	
	47	tigations-----	3072
Metallic reactions in uranium recov-		powder—	
ery-----	4484	compaction of metal powders and	
Metallography:		their mixtures-----	1090
group meeting, technical papers---	4488	Czechoslovak developments-----	15925
physics, translations from Fizika		fundamentals, USSR study-----	17752
metalloy i metallovedeniye---	6698	metal materials, Soviet research---	6956
Metallothermic reduction of yttrium		thorium, USSR study-----	10621
halides-----	16331	titanium alloys, USSR investiga-	
Metallurgical Advisory Committee on		tions-----	2954
Titanium:		USSR developments-----	15911
information bulletin-----	12964	USSR studies-----	803, 5373, 8766
recommended methods of panel on		USSR, use to obtain rhodium---	5404
methods of analysis of colum-		pyrometallurgical processes for re-	
bium and tantalum in titanium		covering manganese-----	1204
alloys-----	12964	research, statistical design of ex-	
Metallurgical plants, injury experi-		periments-----	14507
ence, 1960-----	18073	sodium mass transfer screening test	
Metallurgical slime, sulfide lead, alkyl-		data and analysis-----	14971
dithiocarbamic acid amine salts		solvent extraction application, proc-	
as flotation collectors-----	1232	ess, fundamentals-----	1205
Metallurgists, Chusovoy, city of Ural		technology review, minerals year-	
metallurgists, USSR study-----	2658	book chapter-----	14525
Metallurgy:		USSR—	
abstracts pertaining to Communist		developments-----	10571
China in Soviet journals-----	10766,	industry, hot pressing tech-	
12360, 14273, 19567		nology-----	6865

# INDEX 1963

	Entry
Metallurgy—Continued	
USSR—Continued	
reports, Nov.—Dec. 1962	10518
scientific abstracts	17611, 17947, 19629
variables, effect in ship-plate steels on transition temperatures in drop-weight and Charpy V-notch tests	5715
Yugoslavia, application of radio-isotopes	17747
Zavodskaya laboratoriya (periodical), reports	10590
see also names of metals.	
Metals:	
active, absorption of gases	18508
antioxidant action in fluoroesters and polyphenyl ethers	7370
ceramic-metal seals for high-power tubes	18498
Colorado, New Mexico, Wyoming, technological and economic problems of rare earth resources	3055
comparison of 2 melting-pressure equations constrained to triple point using data for 11 gases and 3 metals	21028
consumption and stocks at brass and wire mills, mineral industry survey, monthly	3482
corrosion and epibiosis of underwater structures of hydroelectric power stations, USSR study	10813
dislocation theory, principles, USSR study	17993
ductile rupture mechanisms, electron fractographic study	11186
failure, effect of state of stress at various temperatures	11517
Federal test method standard, fine threads, strength, USSR study	2282, 1086
high purity, spectral analysis, Hungarian study	10654
high-temperature testing, USSR study	10509
industries—	
employment and injuries, minerals yearbook chapter	19830
injury experience, 1960	18073
intermetallic compounds for very high temperature applications	11518
development	9670
junction of quartz with metal, USSR study	6999
Liquid—	
fast flux loop in advanced test reactor, design criteria	18574
studies in France and Great Britain	12846
metal-ceramic rolling mill, description, USSR study	12343
metallic cloths and yarns, manufacturing for aerospace applications	16768
metallic materials and elements for flight vehicle structures, military handbook	12037
minerals yearbook, 1961	
departmental edition	1225
document edition	284
minor, minerals yearbook chapter	18082-83
noble, thermoelectric properties	11157
nonferrous—	
research reports and translations available from OTS	13265, 15028
secondary, industry in California	5471
nuclear, X-ray preferred orientation meeting, papers presented	16850
optical and infrared properties, theory	9149
errata	19905

	Entry
Metals—Continued	
physies, translations from Fizika metallov 1 metallovedeniye	6698
plastic, cold welding, USSR study	10804
powdered, use in tractor manufacture, USSR study	2846
powders and welding	8824
rare earth—	
borides of	119
industry, Soviet research	6721
introduction in manufacture of high grade materials, USSR study	1079
rare ores, natural radioactivity in mining and concentrating as factor in development of pneumoconiosis, hygienic significance, USSR study	14268
reduction temperature and heat resistance of alloys, USSR study	10432
refractory—	
alloys, extrusion, forging, rolling and evaluation	13196
development of optimum methods for primary working, extrusion techniques and metallurgical evaluation	7648
diffusion barriers, investigation	13195
machining	56
production methods, physical properties, and electronic structure, USSR seminar	5210
production of powders, USSR articles	699
tensile properties and sheet-bending fatigue properties at room temperature	3153
vacuum cladding, USSR study	19546
scrap, temporary suspension of duties, continue—	13424
law	11868, 13746
reports	11868, 13746
smelting and zone-refining by electron beam all-purpose device	10848
surface phenomena, problems, USSR study	8513
testing of volumetric standards	9208
transition, hydrides of	1819
tungsten, molybdenum and alloys of refractory metals, USSR experiments	7016
USSR—	
and Chinese articles, English abstracts	3623
circulation in national economy-vinyl-metal laminates, standard of trade	8763
see also Alloys—Fracture of metals—also names of metals—also names of articles manufactured from metal.	1857
Metals, American Society for, see American Society for Metals.	
Metalwork, architectural, fabrication, injuries and accident causes	1158
Metalworking machinery:	
current industrial reports	3575, 15064
Federal item identification guide for supply cataloging, supplements	3653
USSR industrial development, translations	838, 879, 907, 1007, 1132, 2601, 2924, 2998, 6785, 6890, 8660, 10387, 10423, 10507, 10636, 10783, 12326, 12428, 12510, 12604, 12708, 14283, 14358, 15703, 15811, 15971, 16016, 16106, 16246, 17575, 17608, 17773, 17858, 17887, 19404, 19551, 19656, 19761, 19768.
Metamorphic rocks, see Rocks.	
Metastatic tumors, see Cancer.	



	Entry		Entry
Metcalf, M. E., 1962 Oregon log production	17504	Meteorology—Continued	
Metcalf, Robert W.:		satellites—	
mineral industry of Massachusetts	20958	automatic picture transmission (APT) TV camera system	20985
mineral industry of Virginia	3069	bibliography	14773
Metcalf, Z. P., catalog of Homoptera	1646-	Nimbus spacecraft and its communications system	5571
51, 7549, 16715		radiation view of hurricane Anna from Tiros III	9177
Meteor dust, <i>see</i> Cosmic dust.		results and objectives, etc.	18118
Meteorites:		system analyses	14901
cosmic-ray-induced stable and radio-active nuclides	14570	television cloud photography from—	
living organisms in, USSR study	5214	TIROS II data, catalog	14800
spray ejected from lunar surface by meteoroid impact	9182	TIROS IV data, catalog	11407
Tungusk, velocity and energy, USSR report	3164	summer student trainee report, 1962	16691
Meteoroid bumpers, <i>see</i> Bumpers.		surface observations manual, changes	5769, 20232
Meteoroid effects on space exploration	20983	synoptic, as practiced by National Meteorological Center, NAWAC manual	11408
Meteorological apparatus and instruments, <i>see</i> Anemometers—Radiosondes.		use in Army aviation, technical manual	20327
Meteorological evaluation of radioactive fallout, semi-annual report	7715	USSR—	
Meteorological observers, instructions for climatological observers, revised pages	13114	recent developments	19544
Meteorological technicians, examination announcement	15105	research	8760, 17724
Meteorologiya i gidrologiya (periodical):		wind profiles in atmospheric friction layer, analysis	18453
translations	880,	wind-scales	3237
1077, 2713, 5305, 8500, 8665, 10531, 14281, 15780, 16032, 17658.		<i>see also</i> Hydrometeorology—Micrometeorology — Weather — Winds.	
Meteorology:		Meteors:	
air pollution control, status of meteorological knowledge	1422	astronomy and physics symposium, proceedings, Aug. 28-Sept. 1, 1961, papers	14693
Arctic photo probe, polarized light experiment	16364	meteoroid hazard to space flight structures	3137
bibliography for secondary schools	11379	radar observation, USSR, reports	10687
Communist China—		stone, criterion for mode of ablation	14692
recent developments	909	trails, directional scattering of UHF radio signals, USSR study	6653
role in service of agriculture	15936	Meters, slow-flow meters for fuel oil distribution systems, report of investigation	18195
current Federal research and development activities	16657	<i>see also</i> names and types of meters, or substances, etc., measured.	
density distribution, interlevel correlations with wind	1750	Methacrylates, poly (n-octyl) dilute solution properties	7378
drought phenomena in Southwest-East Germany, use of radar technology	969	Methanes, vapor-liquid equilibria for helium-nitrogen-methane system	7215
equations of motion, transformation into arbitrary orthogonal coordinates	9602	Methionine, toxicity in rat, metabolic effect	18479
global observation system, prospects for international teamwork (remarks)	4648	Methodology, and scores of socio-economic status, description of CB measures used in 1960 census program	16911
hydrologically critical storms in California	7515	<i>see also</i> subjects.	
Indian Ocean research expedition, agreement with India	14721	Methods for analyzing tungsten ores and concentrates	3102
instrumented drones for research use, evaluation	21057	Methyl bromides, eradication of European pine shoot moth in commercial nurseries	15582
literature, conferences, and organizational activities, USSR studies	20901	Methylene blue, gross staining technique in dry fixation of lung tissue	5889
marine observations, manual	3398	Metlakahla Indians, Sir Henry S. Wellcome papers in Federal Records Center, Seattle, Wash	7305
meteorology and hydrology (USSR periodical), translations	880,	Metrazol, <i>see</i> Pentamethylenetetrazol.	
1077, 2713, 5305, 8500, 8665, 10531, 14281, 15780, 16032, 17658.		Metrology, <i>see</i> Gages.	
Oak Ridge, Tenn., data	7705	Metropolitan areas, <i>see</i> Cities and towns.	
publications, price list	3264	Metropolitan police force, <i>see</i> Police.	
records documentation	7516,	Metz, Elmer E., remarks, Dec. 12, 1962	505
11407, 13128, 14799-800, 16668-690, 20245.			
research projects in Barbados, agreement with Great Britain	9426		
rocket and satellite investigations	18171		
satellite system, agreement with Canada	9418		

# INDEX 1963

	Entry		Entry
Mexico:		Mice—Continued	
agricultural commodities agree-		growing, influence of dietary fac-	
ment	1522	tors on plasma cholesterol	13245
agricultural workers, agreement	13074	infected with Coxsackie virus, in-	
alliance for progress programs, re-		fluence of low temperature	14911
port on study mission	8023	mitotic cycle of bone marrow cells,	
print as S. doc., report	20571	study of autoradiographic	
east coast, sailing directions,		method, USSR	20021
change	7346	mitotic cycle of epithelial cells of	
economic developments	2422, 8414	cornea, study by means of trit-	
farm labor program, extend—		ium-tagged thymidine, USSR	16153
hearings	9917, 17159	morphological characteristics of	
reports	9887, 9915,	Microtus hyperboreus, USSR	
	13788, 15362, 17139,	study	16261
18900		mouse damage among hard pines,	
fruits, fumigation with ethylene		variation in resistance	10236
dibromide, manual	20267	potentiation of endotoxin by ex-	
gas appliances, household and com-		posure to cold	18477
mercial, U.S. market	18619	protective doses to 2-mercaptoethyl-	
health information for travel in	16500	guanidine and bis(2-guandico-	
migratory agricultural workers,		ethyl) sulfide given orally	
agreement	1529	against radiation	7637
population trends	11909	Salmonella infection, virulence as	
press comments on ex-Communist		factor	18467
Pellecer	3007	testis injury as result of single and	
radio broadcasting agreement, re-		fractional irradiation during	
port	20537	embryonic development, USSR	
satellite tracking stations program,		study	17902
agreement	16594	twenty-four hour periodicity of mi-	
schools offering summer study and		toses in mice following action	
academic programs, list	13865	of gamma rays	17677
sending gift packages to	2410	white, exposed to high partial pres-	
United States Trade Mission re-		sure of oxygen, gas exchange	
port, 1963	12258	dynamics, USSR study	17733
west coast, sailing directions	21047	Michaels, V. H., summary of U.S. ex-	
weather stations, cooperative mete-		port control regulations	6622
orological program, agree-		Michaud Flats project, amend act, fa-	
ment	13087	cililitate contracts to Indian al-	
Mexico, Gulf of:		lotments, report	17268
coast pilot	1957	Michelson stellar interferometer,	
western basins, surface water qual-		theory, USSR study	8442
ity	20739	Michigan:	
Mexico-United States Interparliam-		annual survey of manufactures,	
entary Group, 2d meeting, Senate		1961, standard metropolitan	
delegation, report	2093	statistical areas and large in-	
Meyer, Andrew U., electrical D-C re-		dustrial counties, statistics	4566
sistivity measurements on		climatological data	3517
glacier ice	4843	county business patterns, activities	
Meyer, Frederick G., plant explora-		covered by OASDI program	13283
tions, ornamentals in Nether-		errata	18672
lands, West Germany, and Bel-		electric rate book	19197
gium	11432	5B redevelopment area, statistical	
Meyer, Paul, pulsed neutron applica-		profile	15130
tion to power reactor start-up		forest plantations of northern lower	
procedures	1831, 14980	area	573
Meyers, Herbert, magnetic results,		ground water contamination and	
Ellsworth High and traverse		legal controls	19331
and McMurdo-to-Pole traverse,		landings, fishery products	3897
Antarctica, 1960-61	1951	population, 1960, characteristics	18654
Meyers, Joseph H., remarks, Sept. 19,		precipitation data, hourly	3771
1963	19338	small forest ownership in urban	
MHD, see Magneto-hydrodynamics.		fringe area	574
Miami, Fla.:		Upper Peninsula—	
occupational wage survey—		mixed conifer swamps, cutting	
departmental edition	9058	methods	15579
document edition	7841	sugar maple dieback, 1962	12178
wholesale fruit and vegetable mar-		women, labor laws, summary	11414
kets, organization	7574	Zimmerman pine moth, natural mor-	
Mica:		talilty	12172
fine, concentration	10956	ZIP code directory	20046
materials survey	5469	Michigan, Lake:	
minerals yearbook chapter	1209, 19546	ports, harbor conditions, etc.	2215
Mice:		small craft, gale and whole gale	
cold ambient temperature effect		warning facilities chart, 1963	13130
upon adrenal weight	18475	southern, trawling survey, Aug.—	
exposed to acute cold, source of		Nov. 1960	13959
secondary invading staphylo-		surface currents, 1931-32	10199
cocci	14909	Mickey, W. V., seismic effects from	
feet injury caused by ice forma-		high yield nuclear cratering ex-	
tion, observations and evalua-		periment in desert alluvium	11573
tion	1756	Micklewright, James T., use air-dry	
fertility, effect of centimeter radio		deckboards for better wooden	
waves	19502	pallets	17476
genus Microtus, bibliography	11584		

Entry	Entry
Microanalysis, <i>see</i> Chemical analysis.	Microorganisms—Continued
Microbes, <i>see</i> Micro-organisms.	television microscopy for demon-
Microbiologists, medical, examination	stration, USSR translation..... 16253
announcement, discontinuance	use in feed production, USSR
notice..... 15104	studies..... 17619
Microbiology:	Micropower transistor logic circuits..... 5573
bacterial synergism, studies with	Microrayons, USSR, present and fu-
simulated Martian environ-	ture development..... 8857
ment..... 7638	Microscopes, <i>see</i> Electron microscopes.
biological oxidation, USSR study..... 16209	Microscopy:
coal, materials inhibitory to growth	darkfield, for detection and identi-
of microorganisms..... 18097	fication of <i>Treponema pal-</i>
fluorescent antibodies—	lidum..... 5683
survey, USSR study..... 14095	electrode processes, investigation..... 7369
use in research, USSR transla-	molecular filters, preparation of ma-
tion..... 16252	rine phytoplankton for exami-
Journal of microbiology, epidemi-	nation and enumeration..... 6467
ology, and immunobiology	television demonstration of micro-
(USSR periodical), transla-	organisms, USSR translations..... 16253
tions..... 15933	television engineering in biology
luminescence and fluorescence, use	and medicine, USSR study..... 8658
in studies, USSR articles..... 15862	<i>see also</i> Slides (glass).
luminescence, use in microbiological	Microtus hyperboreus, <i>see</i> Mice.
tests..... 15871	Microwaves:
Moscow Dept. of all-Union Society,	effect on cardiovascular system of
work, 1962..... 1114	healthy person, USSR study..... 18009
peats of Ukraine, USSR study..... 20915	energy, generation and transmis-
practical exercises, USSR textbook..... 10816	sion..... 7681
relative response to varying types	optics of millimeter waves and
and methods of application of	radioastronomy, USSR study..... 2520
ionizing radiation..... 7416	radar microwave link equipment,
sugarbush and sugarhouse, prob-	maintenance..... 13893
lems and remedial procedures,	tubes, materials useful in design,
etc..... 18404	manual..... 1780
sulfur deposits, Kara Kum, USSR	MTD, <i>see</i> Meat Inspection Division.
investigations..... 14429	Middle America, economic policies and
USSR—	programs, report..... 4666
All-Union Microbiological Soci-	Middle Atlantic States, <i>see</i> Atlantic
ety, 2d Congress, proceedings..... 16247	States.
translations..... 12582, 14330	Middle East, <i>see</i> East (Middle East).
Microcatalytic reactors, <i>see</i> Reactors.	Middle Gila River project, Buttes
Microelectronics, <i>see</i> Electronics.	Dam and Reservoir, Interior
Microfilms, newspapers, list..... 20930	Dept. report..... 17069
Microflora, <i>see</i> Bacteria and bac-	Middle Snake River, drainage, water
teriology.	temperature studies for 1958..... 8284
Microgeometry, terrain mapping tech-	Middlesex Concrete Products & Ex-
nique..... 2230	cavating Corp., relief..... 9962,
Microhydrogenation technique for	13491, 16980
identifying organic sulfur,	Middleton, Helen K., hydraulic re-
nitrogen, oxygen, and halogen	search in United States, 1963..... 16418
compounds..... 1236	Middleton, Wilbur D., highly swept
Micrometeoroids:	arrow wings designed for Mach
phenomena, Explorer XVI presenta-	no. 2.0 for Mach no. 2.0 em-
tion of outer space enigma..... 9142	ploying various degrees of
velocity detector..... 19933	twist and camber..... 7277
Micrometeorology:	Midland, Tex., Air Terminal, weather
energy budget at earth's surface..... 16756-	observations, hourly summary,
757	decennial census..... 16665
South Pole program, data presenta-	Midshipmen, <i>see</i> Naval Academy, An-
tion..... 1435	napolis.
turbulent diffusion theory..... 7607	Midwest (U.S.):
Microminialaturization, <i>see</i> Miniaturi-	costs of procurement and assembly
zation.	of eggs in 3 Midwestern
Micronaire readings, new service for	States..... 2128
cotton producers..... 11427	feed contract program, gains and
Microorganisms:	losses for manufacturers, etc..... 8150
and algae interrelation, USSR	fresh fruit and vegetable unloads,
study..... 8451	midwestern cities..... 9527
apparatus for determining number	Midwestern Machinery Co., accident..... 14076
of microbes in air, Czecho-	Miecielica, Zofia, relief..... 13410, 13482, 20547
slovakian patent..... 936	Mientras su bebe esta en camino..... 6014
genetics, USSR study..... 6774	Miesch, A. T., distribution of elements
marine, destruction of film-fouling	in Colorado Plateau uranium
base of antifouling paints,	deposits..... 15605
USSR study..... 17739	Mighell, Ronald L., vertical coordina-
materials in coal inhibitory to	tion in agriculture..... 4801
growth..... 18097	Migrant labor:
microbes and the cosmos, USSR	children—
study..... 931	education, selected State pro-
new class of Krassilnikovlae	grams..... 19118
(Kriess), USSR study..... 17702	problems and trends in educa-
pathogenic microbes in environ-	tion..... 20639
ment, survival and detection,	what's happening in education?..... 10084
USSR study..... 19548	community efforts to improve con-
	ditions, guide..... 14447

# INDEX 1963

	Entry		Entry
Migrant labor—Continued		Military aid:	
contractor registration—		agreement with—	
hearings -----	10021, 11895	Belgium -----	1526, 7441
reports -----	11819, 11972	Japan -----	3344, 18334
day-care services for children—		Philippines -----	9438
hearings -----	10021	defense, military assistance, India,	
report -----	11968	agreement -----	3354
education, selected references -----	6343	disposition of equipment and ma-	
educational opportunities for farm		aterials, agreement with—	
workers and their children,		Turkey -----	5741
improve—		United Kingdom of Great Britain	
hearings -----	10021	and Northern Ireland -----	20181
report -----	11971	foreign assistance act of 1963—	
farm workers, interstate transpor-		hearings ---	9933, 11899, 13647, 13804
tation, ICC regulations -----	12269	reports -----	15282, 15292, 20584
housing, labor camp standards -----	9035	foreign operations appropriations,	
investigation, authorization, re-		1964, hearings -----	18918
port -----	6264	Japan, payment by U.S. of costs	
Mexican agricultural workers,		for administrative etc., ex-	
agreement -----	13074	penses, GAO report -----	14012
problem in U.S., report -----	9982	mutual cooperation and security	
sanitation, provide adequate facil-		treaty with Japan—	
ities—		report -----	20542
hearings -----	10021	text -----	20519
report -----	11969	mutual defense and assistance pro-	
sanitary facilities, provide, hear-		grams, proposed, 1964, sum-	
ings -----	4789	mary presentation -----	10347
Migration:		rehabilitating equipment donated	
birds, general information -----	6452	under military assistance pro-	
lifetime and recent, census of		gram, excessive costs, GAO	
population, 1960 -----	16908	report -----	12202
mobility for States and State		scope and distribution, report of	
economic areas, census of popu-		committee to the President ---	9401
lation, 1960 -----	20363	surface-to-air missile battalions for	
Migration of workers, see Migrant la-		air defense, agreement with	
bor.		Japan -----	21121
Migratory Bird Conservation Com-		western Europe, subcommittee re-	
mission, alternate representa-		port -----	11900
tion of secretarial officers and		Military Air Transport Service:	
expenses, hearings -----	4757	MATS flyer (periodical) -----	3889
Migratory birds, see Birds—Game		national military airlift—	
and game birds—Water birds.		hearings -----	18925
Migratory Labor, National Advisory		subcommittee report -----	18926
Council on, see National Ad-		policies and programs, 1963—	
visory Council on, Migratory		hearings -----	11903
Labor.		report -----	13622
Migratory workers, see Farm labor—		Military Appeals Court, see Court of	
Migrant labor.		Military Appeals.	
Mikrobiologiya (periodical):		Military art and science:	
translations -----	14330	airmobile operations, field manual.	
Milbrandt, Allen C., soil survey of		Biryusov's war memoirs, review in	
Lincoln County, Miss. -----	18318	Izvestiya -----	19634
Miles, R. D., soil trafficability fore-		cybernetics, applications, East Ger-	
casting, airphoto approach -----	13885	man study -----	15977
Milestones in marketing in Dept. of		East Europe, information -----	8895
Agriculture -----	9530, 14821	engineer functional components	
Milford Dam and Reservoir, railroad		system, staff tables -----	13241
rights-of-way, pay value of im-		French army, changes in policy,	
provements, of lessees, report -----	15288	structure, etc., since Algerian	
Millieu rehabilitation for physical and		war -----	15779
mental handicaps -----	14768	materials on doctrine, training,	
Militarism, Western militarists and		cybernetics, Soviet transla-	
Chinese Communists, parallel		tions -----	10418
thinking, views of Soviet press -----	19633	mission and services of Transpor-	
Military Academy, Preparatory		tation Corps -----	13240
School, Fort Belvoir, cata-		northern operations, Army field	
logue -----	1805	manual -----	5910
Military Academy, West Point:		operational analysis of use of air	
cadets, increase authorized		cushion vehicles in support of	
strength, etc.—		Army's off-road logistic mis-	
hearings -----	13641	sion -----	20205
reports -----	13611, 13621	rifle squad fire, tactical applica-	
catalogue, 1963-64 -----	16317	tion, field manual -----	11532
graduates, serum lipid and lipopro-		strategy and command, first 2 years,	
tein concentrations, 1952-60 -----	13217	war in the Pacific -----	9107
official register, 1962 -----	10935	strategy and economics, USSR	
Military Advisory Group to Republic		study -----	14102
of Korea, see United States		tactical decision-making in aero-	
Military Advisory Group to		space surveillance -----	11507
Republic of Korea.		Thailand, environmental condi-	
Military Affiliate Radio System, gen-		tions affecting military logis-	
eral information -----	13835	tics -----	1434
		triumph in the Philippines, war in	
		the Pacific -----	12820

	Entry		Entry
Military art and science—Continued		Military hospitals, Army and Navy, unnecessary costs to be incurred under military departments' proposals for continued operation of separate facilities in San Francisco Bay area, Calif., GAO review—	14009
USSR—		Military hygiene, <i>see</i> Hygiene.	
doctrine and training, translations—	8470	Military index:	
methods of research in military science—	10417	Defense Department, specifications and standards—	19079
questions on military history in book <i>Military strategy</i> —	15791	notice—	8140
translations—	764, 874, 1025, 5130, 6872, 6927, 12614-617, 17751, 17784, 19419, 20857	supplement—	3779
border troops—	19407	Military information:	
DOSAAF Congress—	680	Eastern Europe, translations—	810, 870, 990, 2642, 2842, 2925, 6751, 7061, 7122, 8453, 8559, 8695, 8755, 8809, 10376, 10463, 10667, 10688, 12349, 12385, 12422, 12481, 12511, 12568, 12644, 14089, 14387, 15706, 15810, 17593, 17783, 19498, 19515, 20860.
KGB anniversary—	7123	Israel, translations—	2988, 5366
Military assistance, <i>see</i> Military aid.		Military installations, <i>see</i> Installations (military).	
Military automotive vehicles, <i>see</i> Motor vehicles.		Military intelligence, Air Force pamphlet—	55
Military budget, <i>see</i> Defense Department.		Military justice, <i>see</i> Military law.	
Military ceremonies, honors, and salutes, Air Force manual—	5864	Military law:	
Military communications:		military justice handbook—	
defense communications system engineering—installation standards manual—	17340-341	trial counsel and defense counsel—	4452
signal battalion, armored, mechanized, and infantry divisions, field manual, changes—	9652	trial guide for special court martial president—	9655
signal orders, records and reports, field manual—	9654	review, Army Dept. pamphlet—	3898
Military construction, <i>see</i> Building—Installations (military).		staff judge advocate handbook, Army Dept. pamphlet—	18546
Military courts, <i>see</i> Courts martial and courts of inquiry.		uniform code of military justice, amend—	
Military discipline:		hearings—	11883
Army personnel, correlates of disciplinary record in wide-range sample—	4463	reports—	13538, 13587
peer ratings as predictors of disciplinary problems—	4462	USSR foundations—	14216
Military drill, Air Force manual—	5864	Military missions:	
Military education:		agreement with—	
airman specialties, rankorder estimates of time required for cross training—	4401	Costa Rica—	14728
cold war education and speech review policies, hearings, index—	2085	El Salvador—	14726
doctrine and training, USSR studies—	17784	Panama—	5737
service schools, organization and functions, brief—	8135-36	Military occupational specialties: changing pattern of military skills—	20647
USSR—		Marine Corps, specialties and schools, guide—	19814
training and indoctrination—	1025	Military operations, <i>see</i> Military art and science.	
training, translations—	8470	Military pay, <i>see</i> Pay, allowances, etc.	
<i>see also</i> Officer candidates school—Squadron Officer School.		Military personnel, <i>see</i> Armed Forces.	
Military engineering, oversnow transport—	19138	Military police, air police law enforcement operations, Air Force manual—	1746
Military equipment, <i>see</i> Military supplies.		Military posture, hearings—	6187
Military government:		Military psychology, <i>see</i> Psychology.	
Japanese administration in Indonesia—	19661	Military records, new Army equipment record system—	5914
Trust Territory of Pacific Islands—Islands naval administration, trusteeship period, 1947-51—	14623	Military research:	
Military handbooks—	344-346, 4797, 12037-38, 19080, 20617.	Air Force research grant program, development—	14915
Military history:		Army research and development, newsmagazine—	3467
Army, World War II, Medical Department—	16832	Polaris management—	3238
organization and administration—	11550	systems development and management, Gov't contracting, hearings—	290, 13652
Harmon memorial lectures (series)—	13194	Military review (periodical)—	3899
Marine Corps historical bibliographies series—	16305	Military science, <i>see</i> Military art and science.	
Marine Corps historical reference series—	16306-310	Military Sea Transportation Service:	
marines in Civil War, bibliography—	16305	general information—	3213
Soviet, question concerning book, <i>Military strategy</i> —	15791	loading mariner-class ship—	7362
		sealift magazine—	4173
		Military service:	
		American youths, qualification—	1814
		military profession today (address)—	11509
		Saudi Arabia noncommissioned officers and privates, regulations—	12476



# INDEX 1963

	Entry
<b>Military service—Continued</b>	
universal military training and service act—	
amend—	
hearings -----	13639, 15376
law -----	17040
reports -----	13543, 15360
exemption of surviving son—	
hearings -----	13640
report -----	13603
induction provisions, extend—	
hearings -----	6186, 8091
law -----	7821
reports -----	6139, 6160, 6272
<i>see also</i> Armed Forces.	
<b>Military standards</b> -----	2115-17, 10042-43, 17348-350, 19081-83, 20618-623.
<b>Military supplies:</b>	
Air Force procurement instructions -----	3439
Armed Forces procurement regulations, revision -----	3465
armed services procurement regulations -----	6311
Army Materiel Command, activities during 1963 -----	18539
Army procurement procedures, changes -----	5908, 7665, 9648, 18540
cataloging system, standardization, etc., semiannual reports -----	18927-928
Defense Department—	
specifications and standards, index -----	19079
alphabetical listing, supplement -----	3779
classification listing -----	3779
notice -----	8140
numerical listing, supplement -----	3779
standardization documents, classification listing -----	19078
defense supply procurement regulation, revision -----	3590
disposition of equipment and materials, agreement with Turkey -----	5741
equipment, loan to Boy Scouts of America in 1964—	
law -----	13415
reports -----	4733, 11976
Federal supply catalog, manual, Jan. 1963 -----	10034
GSA supply services to military activities -----	596
guide for line officers performing supply duties -----	19994
impact of military supply and service activities on economy -----	13439
inspection, DSA civilian career program -----	15408
inspection equipment design, standardization handbook -----	20617
National Guard, stock control, list of reportable items -----	19958
Navy, specifications, standards, and qualified products lists, guide -----	21063
new record system -----	5014
operating forms, cataloging manual -----	8138
procurement—	
and small business report -----	2036
and supply, background material on economic aspects -----	7829
Army, procedure, changes -----	14936
how to do business with Defense Supply Agency -----	343
impact on economy, hearings -----	11731
relation of cost data, hearing -----	11886
procurement legal service, Army pamphlets -----	1806, 9459, 9661, 13239, 14946, 16826-827, 18553
purchasing, specifications and sales directory -----	1493

	Entry
<b>Military supplies—Continued</b>	
Quartermaster Corps inspection, 1946-56 -----	3306
rehabilitating equipment donated under military assistance program, excessive costs, GAO report -----	12202
standardization policies, procedures, etc., manual -----	10035, 20616
supply manual -----	18542
technical manual, specification standardization program -----	8139
military training, <i>see</i> Military education.	
<b>Milk:</b>	
containers, amend D.C. act regarding size, report -----	18893
distributors' sales and costs -----	3900
diversified processing plants in Kansas, Missouri, and Oklahoma, production cost of cottage cheese and frozen desserts -----	14872
evaporated, condensed, and dry -----	3630
excess costs of milk purchased for Guantanamo Naval Station, GAO report -----	12201
farm production, disposition and income, 1961-62 -----	11338
Federal import act and regulations -----	10204
Federal marketing orders -----	
areas, with population data -----	13147
pricing systems, Government's role -----	354
program -----	13173
questions and answers -----	13138
Federal milk order study committee, report -----	43
Federal order markets, impact of dairy cooperatives -----	15462
Federal orders -----	
allotments under, reduce excess marketings, etc., report -----	17248
market statistics -----	
annual summary, 1962 -----	16764
monthly -----	3681
supplement, 1961 -----	1725
marketing, summaries -----	16708
fission product concentrations, rapid methods for estimating -----	9338
fluid—	
Government's role in pricing -----	354
industry, outlook for 1963 and review of 1962 -----	5966
fluid milk and cream monthly report -----	3713
interstate shippers, certification under State-PHS cooperative program -----	16516
marketing adjustments, hearings -----	20493
marketing orders, allotments for producers, hearings -----	9993, 11869, 12004
ordinance and code, utilization by States, communities -----	9360
plants—	
multipurpose, processing market milk, etc., layouts and operating criteria for automation -----	16746
processing milk and half-and-half, layouts and operating criteria for automation -----	7572
production—	
monthly reports -----	1563-64, 3901
statistical summary, 1962 -----	5748, 9444, 11337, 16617-618, 7462
protection by dairy farmers after nuclear attack -----	10138
safe milk through cooperative effort of industry, States, and Public Health Service -----	9353

	Entry		Entry
Milk—Continued		Millwork, Federal item identification guides for supply cataloging, supplements	3655
amend Public Health Service act hearings	2053	MILSTAMP, military standard transportation and movement procedures, joint regulation	17351
honor roll for 1960-62	1411	Milwaukee, Wis.:	
strontium-90 content, rapid method for determining, USSR study	8991	electric facilities of area, map	517
strontium-90 in milk from Brainerd, Minn. milkshed, factors influencing	3279	income, education, and unemployment in neighborhoods	9070
3-stall milking plant for 20 to 40 cows, farm building plan	14879	occupational wage survey—departmental edition	14466
Milk plants, <i>see</i> Milk.		document edition	13447
Milking Shorthorn cattle, <i>see</i> Cattle.		principal electric facilities, map	2266
Milkweed, livestock poisoning in Western States, reducing losses	14856	Mimeograph, <i>see</i> Duplicating processes.	
Mill slimes, lead and zinc recovery	16335	Mimeograph paper, Federal standard—	534
Millard, Walter W.:		Minas Gerais, Brazil:	
acetylsalicylic acid effect on man's skin temperature in cold	18481	Cachoeira do Campo, Dom Bosco, Ouro Branco quadrangles, geology and ore deposits	602
pocket pen flare evaluation	11506	geology and mineral resources (series)	601, 15609
Mil drum, Timothy R., <i>see</i> Yoo Chul Soo.		geology and ore deposits of Nova Lima and Minas Gerais quadrangles	601
Miller, C. O., Project SIAT (synthesis of impact acceleration technology)	18353	Mine accidents:	
Miller, Clement W., memorial services	1962	coal mine disasters, U.S., not classified as explosions of gas or dust, 1846-1962, historical documentation	14493
Miller, Dwight L., bridging utilization engineering development to industrial use	1638	coal mines, injuries, monthly report	3519
Miller, Helen A., Federal assistance for educational purposes	9929	metal and nonmetal industries, safety organization and activities	18076
Miller, Herman P.:		metal industries injury experience	16323, 18073
money value of an education—trends in income of families and persons in United States, 1947-60	13304	Mine explosions, <i>see</i> Coal dust.	
Miller, J. H., response of cotton to 2,4-D and related phenoxy herbicides	18446	Mine props:	
Miller, J. O., structural fabric programs	16768	precast concrete supports—installation, etc.	14518
Miller, James W., State dental radiological health activities	9357	progress report	10943
Miller, John E., supercompressibility factors for helium-nitrogen mixtures	9123	Mine rescue work, national contest, 1961	1203
Miller, John F., probable maximum precipitation and rainfall-frequency data for Alaska, etc.	16692	Mine-roof bolts, <i>see</i> Bolts and nuts.	
Miller, John L., Jr., lead and barium disilicic fluorides	10961	Mine roofs:	
Miller, John S., unsteady-state gas flow in consolidated porous media	19872	bedded—combined effects of friction and suspension in bolting	1254
Miller, Kenneth F., relief	7885	effect of suspension in bolting	1253
Miller, Leonard M.:		Mine safety, <i>see</i> Safety of life.	
dropout, schools search for clues to his problem	17368	Mine ventilation, coal mines, continuous-miner places	10939
dropouts, selected references	15425	Mineral engineering:	
preparation in school and college personnel work	13854	adaptation of new research techniques, progress report	18584
Miller, N. J., optimized propellers for ground effect machines	18350	mine rocks, triaxial apparatus for testing	20972
Miller, William C., noise from pneumatic rock drill	5491	research, adaptation of new techniques to problems	5937
Miller, William M., chronology of Marine Corps	16306-310	Mineral-fuels, <i>see</i> Fuel.	
Millican, Richard D.:		Mineral industries, <i>see</i> Minerals.	
advertising, volume and expenditures, bibliography	18307	Mineral lands:	
selling by mail-order	3323, 20128	conveyance of mineral interests property in South Carolina to surface owners	11995, 13525, 16977
Millimeter waves, <i>see</i> Microwaves.		conveyance of mineral rights—	
Milling (metallurgy):		to California, report	15281
methods and costs Johnson Mine, Eastern Magnesia Talc Co.	3057	to Christmas Lake, Inc.	17010, 17076
San Manuel Copper Corp., Pinal County, Ariz., errata	3053	to Christmas Lake, Inc., and Karlson Development Corp.	11996
Mills, Theodora, Soviet agricultural trade, 1955-61	15420	sale of interests in property owned by J. D. Wishart and wife	13397
Mills, <i>see</i> Flour mills—Paper mills—Planing mills—Rolling mills—Sawmills.		reports	7913, 13677
		Mineralogy, <i>see</i> Minerals.	
		Minerals:	
		Alabama industry, minerals yearbook chapter	1210, 20952
		Alaska industry, minerals yearbook chapter	19847, 20953
		Arizona industries, water requirements and uses	12824
		Arizona industry, minerals yearbook chapter	1211

# INDEX 1963

	Entry
Minerals—Continued	
California industry, minerals year-	
book chapter	3060
carbonate mineralogy, Eniwetok	
Atoll	19308
census publications, price list	9334
clay—	
in Morrison formation of Colo-	
rado Plateau	600
in Triassic rocks of Colorado	
Plateau	19296
Colorado industry, minerals year-	
book chapter	3061
Connecticut industry, minerals	
yearbook chapter	20954
contributions to geochemical pros-	
pecting (series)	17521
cosmic mineralogy, new branch of	
science	18177
Delaware industry, minerals year-	
book chapter	18080
deposits—	
mineralogy of manganese of	
Maple and Hovey Mountains	
area, Aroostook County, Maine	6554
Telluride, Colo., area	6546
Turtle Lake quadrangle, Wash.	12222
Twin Crags quadrangle, Idaho	6550
dermal excretion, relation to bal-	
ance, etc	1813
Florida industry, minerals yearbook	
chapter	1212
Georgia industry, minerals yearbook	
chapter	20955
Hawaii industry, minerals yearbook	
chapter	19848
Idaho industry, minerals yearbook	
chapter	20956
Illinois industry, minerals yearbook	
chapter	1213
Indiana industry, minerals yearbook	
chapter	1214
industries—	
area reports, annual	3463
employment and injuries, min-	
erals yearbook chapter	20946
enterprise statistics, 1958	9727
announcement and order form	9710
technologic trends, minerals year-	
book chapter	1257
industry, state of, hearings	15390
ion exchange on mineral materials	
(series)	599, 5017
Iowa industry, minerals yearbook	
chapter	20957
Kansas industry, minerals yearbook	
chapter	3062
leasing act of 1940, amend, hear-	
ing	19059
Louisiana industry, minerals year-	
book chapter	3063
Maine industry, minerals yearbook	
chapter	19849
mapping and geodetic control, pa-	
pers prepared for United Na-	
tions conference	5095
Massachusetts industry, minerals	
yearbook chapter	20958
melting and transformation tem-	
peratures of minerals, etc	19295
mineral trade notes	3902
mineralogy—	
and paragenesis of ore deposit	
at Monument no. 2 and Cato	
Sells Mines, Monument Valley	
area	12220
Guam, selected soils	19316
minerals and primary products,	
Federal item identification	
guides for supply cataloging,	
supplements	3658
minor, minerals yearbook chapter	18083
Mississippi industry, minerals year-	
book chapter	20959

	Entry
Minerals—Continued	
Missouri industry, minerals year-	
book chapter	1215
Montana industry, minerals year-	
book chapter	3064
Nebraska industry, minerals year-	
book chapter	1216
needs of dairy cattle	14837
Nevada industry, minerals year-	
book chapter	1217
New Hampshire industry, minerals	
yearbook chapter	19850
New Mexico industry, minerals	
yearbook chapter	20960
New York industry, minerals year-	
book chapter	1218
North Carolina industry, minerals	
yearbook chapter	20961
North Dakota industry, minerals	
yearbook chapter	1219
Ohio industry, minerals yearbook	
chapter	1220
Oklahoma industry, minerals year-	
book chapter	1221
Oregon industry, minerals yearbook	
chapter	1222, 19851
Pennsylvania industry, minerals	
yearbook chapter	3065
production, statistical summary,	
minerals yearbook chapter	1256, 20973, 18280
publications, price list	
Puerto Rico, Panama Canal Zone,	
Virgin Islands, and possessions	
industry, minerals yearbook	
chapter	19852
resources—	
Alaska (series)	6545
code of Federal regulations	6430
educational grants for mineral	
research, hearing	20611
Malagasy	20950
Minas Gerais, Brazil (series)	601-602, 15609
Missouri River Basin, impor-	
tance	1195
U.S. participation in exploration	
(remarks)	8370
Rhode Island industry, minerals	
yearbook chapter	19853
sale of interests in property owned	
by J. D. Wishart and wife	7913, 13397, 13677
sediment from vicinity of Brook-	
haven National Laboratory	17526
South Carolina industry, minerals	
yearbook chapter	19854
South Dakota industry, minerals	
yearbook chapter	1223
Tennessee industry, minerals year-	
book chapter	3066
Texas industry, minerals yearbook	
chapter	3067
Utah industry, minerals yearbook	
chapter	3068
Vermont industry, minerals year-	
book chapter	18081
Virginia industry, minerals year-	
book chapter	3069
Washington industry, minerals	
yearbook chapter	1224
West Virginia industry, minerals	
yearbook chapter	3070
Wisconsin industry, minerals year-	
book chapter	20962
Wyoming industry, minerals year-	
book chapter	3071
yearbook, 1961—	
area reports—	
departmental edition	1226
document edition	285
fuels—	
departmental edition	9116
document edition	7850

	Entry
Minerals—Continued	
yearbook, 1961—Continued	
metals and minerals except fuels—	
departmental edition—	1226
document edition—	284
see also names of minerals.	
Minerals Exploration Office:	
budget, 1964, decrease, proposal—	4729
exploration assistance program—	12821
press releases—	4071
semi-annual reports—	9108, 19820
Miners' International Federation,	
International labor study—	5099
Mines and mining:	
abstracts pertaining to Communist China in Soviet journal, mining—	963, 10434, 17477
African industry, transport problems in central and south basins, USSR study—	15870
industries, employer expenditures for supplementary remunerative practices for production workers, 1960—	
departmental edition—	10895
document edition—	9816
industry, Communist China, translations—	651, 914, 1030, 1102, 2553, 2699, 2792, 2913, 6739, 6870, 7044, 8456, 8482, 8533, 8842, 8983, 10440, 12347, 12724, 14135, 14181, 15966, 16089, 19382, 19560, 19667, 19742, 20861, 20913.
injury experience, nonmetal industries except stone and coal, 1959—	19835
Kern County, Calif., underground borate mining—	3073
mapping and geodetic control, papers prepared for United Nations conference—	5095
methods and costs—	
Deep Creek mine—	14500
Johnson Mine, Eastern Magnesite Co.—	3057
mine products, carload waybill statistics—	6629, 8428
mine-systems analysis, design and applications of some mathematical models—	5485
mining claims, questions and answers—	16300
noncoal, mobile diesel-powered equipment approved—	18074
nonmetal industries, safety organization and activities of award-winning companies—	18076
open-pit mine, methods and costs. Inspiration Consolidated Copper Co. open-pit mine, Gila County, Ariz.—	7210
publications, price list—	18280
review of mining technology, mineral yearbook chapter—	3105, 14526
San Manuel Copper Corp, Pinal County, Ariz., errata—	3053
San Manuel Mine, Pinal County, Ariz., surface subsidence measurements—	9131
structural survey of private mining operations, Project Sedan—	11571
see also Blasting—Coal mines and mining—Metal mines and mining—Mine accidents—Mine props—Mine rescue work—also names of metals and minerals mined—also names of mines.	
Mines Bureau:	
Albany Metallurgy Research Center, metallurgical progress reports—	140, 9692, 11585, 15018

	Entry
Mines Bureau—Continued	
area report, annual—	3463
boiler-water service—	10941
bulletins—	1197, 3051, 7202-4, 9109-10, 14493, 16318, 19824, 20941.
coal research and technologic work—	14498, 20947
geologists, examination announcement—	16955
helium procurement under negotiated fixed-price contracts, GAO examination—	2323
information circulars—	1201-07, 3053-57, 5469-73, 7205-12, 9111-14, 10936-941, 12824-831, 14497-501, 16322-325, 18073-76, 19835-839, 20947-950.
mobile diesel-powered equipment approved for noncoal mines—	18074
publications—	
and articles, Jan. 1-Dec. 31, 1962, list—	18079
monthly list—	3958
releases—	4072
report of investigations—	1229-54, 3072-3104, 5475-5502, 7213-26, 9118-36, 10943-967, 12834-839, 14507-524, 16330-347, 18093-104, 19856-875, 20964-972.
Minetti, G. Joseph:	
addresses, etc.—	
June 20, 1963—	13315
Nov. 1, 1963—	20372
Miniaturation:	
microminiaturization techniques for communications equipment—	1768
microminiaturized physiological instrumentation package—	5858
Minimum property standards for swimming pools—	20671
Minimum wage, see Wages.	
Mining, see Mines and mining.	
Mining machinery:	
and equipment—	
current industrial reports, 1962. shipments and related data, 1955-61—	1863
equipment, Federal item identification guides for supply cataloging, supplements—	3652
German coal planer for longwall mining, Pocahontas no. 3 coalbed, Keystone, W. Va.—	19863
mobile diesel-powered equipment for noncoal mines—	18074
Minkus, Wilfred J., nonlinear closed-loop control systems with stationary stochastic inputs, analysis—	19939
Minneapolis, Minn.:	
electric facilities of area, map—	518
income, education, and unemployment in neighborhoods—	5457
International Airport, weather observations, hourly, decennial census—	9496
occupational wage survey—	
departmental edition—	10901
document edition—	9822
principal electric facilities, map—	2266
sand and gravel operations and costs in area—	10936
Minnesota:	
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics—	4567
climatological data—	3517
county business patterns, activities covered by OASDI program—	15050, 18673
electric rate book—	15495

# INDEX 1963

	Entry		Entry
Minnesota—Continued		Missilemen, Army, selection of anti-tank missile gunners, status report	4467
5B redevelopment area, statistical profile	15125	Missiles:	
forest area trends in counties	15572	air-to-surface canard configuration, static longitudinal stability characteristics	11003
jack pine stands, seed stored in cones	6514	anti-missile defense—	
labor potential for expanding forest industries	6513	USSR articles	15735
landings, fishery products	3903	with quantum generators, USSR study	17901
northern—		Army Missile Command, RT-TR series	18263
changes in timber harvest	12176	Atlas and Titan International ballistic, launch facilities, administration of construction at selected Air Forces bases, GAO review	2324
forest soil freezing and influence of management practices	12187	Atlas, completion of operational development phase, ceremony (remarks)	4408
population, 1960, characteristics	18655	ballistic—	
precipitation data, hourly	3771	Ames atmosphere entry simulator and its application to determination of ablative properties of materials	11006
women workers, 1960	11417	base heating with operating rocket	5530
ZIP code directory	20047	fuse mechanisms, insulated and uninsulated, subjected to simulated reentry aerodynamic heating, heating and impact tests	18127
Minnesota River:		nylon as ablative material	10995
channel improvement, engineer report—		VHF-UHF missile- and space-research radar with 150-ft. steerable antenna	12950
departmental edition	2180	Bomarc, target seeking systems, overpricing, GAO review	8318
document edition	2004	defense against, USSR study	19696
Minorities:		Defense Dept. military procurement appropriations, 1964—	
Communist China—		hearings	6187, 8092, 11873
Chuang nationality	14382	law	11720
economic activities of nationalities	14350	reports	6142, 6161, 8073, 9902
ethnography and national minorities	960	employing wings of very low aspect ratio, aerodynamics	18116
mistreatment, Kazakh study	20822	Falcon, excessive costs included in prices of components purchased from Avco Corp., Crosley Division, Cincinnati, Ohio, by Hughes Aircraft Co., under negotiated contract, GAO report	20714
North Vietnam, zonal autonomy, implementation of policy in Viet Bac zone	17681	guided—	
Minors, see Children.		Federal item identification guides for supply cataloging supplements	8660
Minow, Newton N.:		United States, general information	13836
addresses, etc.—		high temperature ceramic structures	9279
Nov. 14, 1962	486	ICBM re-entry, transient heating and melting process of glass shields at stagnation point	11037
Jan. 22, 1963	4888	industry, research and redevelopment, 1956-61	11132
Apr. 2, 1963	10114	labor market developments	13874
Mint (plant):		liquid oscillations in spherical tanks, slosh-damping	12860
farming	5815	low-aspect-ratio cruciform-wing configuration employing canard and trailing-edge flap controls, aerodynamic characteristics	14540
Mint Bureau, report, 1962	10968	manufacturing, job horizons	3039
Minter, C. C. effect of pressure on thermal conductivity of gas	18243	Navaho, NSM-64A and booster, investigation—	
Mints:		force study	7237
additional facilities—		pressure study	10990
hearings	8093, 17184	Nike-Hercules guided missile system, overprocurement of transporters by Army Dept., GAO report	14001
law	17032		
reports	9978, 15266		
Miraglia, G. J.:			
source of secondary invading staphylococci in mice	14900		
virulence as factor in Salmonella infection in mice maintained in the cold	18467		
Mirovaya ekonomika i mezhdunarodnyye otnosheniya (periodical): translations	10384		
MIS, see Material Inspection Service.			
Miscellaneous bills, see Bills (congressional).			
Miscellaneous collection series, see Smithsonian miscellaneous collection.			
Miscellaneous papers, see names of departments, etc., issuing papers.			
Miscellaneous publications, see names of departments, etc., issuing publications.			
Mishkor, Koreiz, Gaspra Health Resort, USSR, guide	12488		
Missile and Space Division, Lockheed Aircraft Corporation, additional costs from procurement of test equipment as special tooling, GAO report	15590		
Missile bases, Cuba, President Kennedy's report to the people on protecting the peace (address)	1577		
Missile Sites Labor Commission, see President's Missile Sites Labor Commission.			
Missile technicians, Navy training course	5655		



# JANUARY-DECEMBER

	Entry
Missiles—Continued	
nondestructive testing, infrared technology	18263
Polaris—	
Fleet Ballistic Missile program, management	3238
prices of parts awarded to Brush Beryllium Co., GAO examination	10259
sales, agreement with Great Britain and Northern Ireland	13076
publications, list	14652
reliability, military-industry symposium, papers	8141
S-11 launchers installed in UH-1B helicopters, flight evaluation	13200
SS-11, weapon system flight evaluation	14903
stabilizers—	
aerodynamic heating tests	11002
supersonic jet tests	5560
static longitudinal stability and roll characteristics of 3-stage configuration	10996
structural materials—research areas, recommendations and evaluations	21007
surface-to-air—	
battalions for air defense, agreement with Japan	21121
structures and power sources, ORDP pamphlet	3246
weapon control, ordnance engineering design handbook	3245
tailless configuration having 45° sweptback wing of aspect ratio 4, free flight investigation of stability characteristics	10979
Tarter, overprocurement by Navy Dept. of spare guidance components for shipboard repair, GAO review	15597
tri-service range radar instrumentation development program, NRL services	12954
USSR report on Western missiles and anti-missiles	12621
wind loading, sonic anemometer for study	1740
Missiles Sites Labor, President's Commission, see President's Missile Sites Labor Commission.	
Missing persons act, amend to cover persons detained in foreign countries against will, report	13536
Missisquoi National Wildlife Refuge, birds	15532
Missisquoi River and Valley, bedrock geology and asbestos deposits of upper valley and vicinity, Vt	19292
Mississippi:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4569
climatological data	3517
county business patterns, activities covered by OASDI program	15053
errata	18674
Delta area, crop production practices, etc., 1957-58	352
embayment water resources	12226
5B redevelopment area statistical profile	13370
forest resources	1475
industry, pine lumber	1469
landings—	
fish and shellfish, annual summary, 1962	20683
fishery products	3904
loblolly pine planting for erosion control	20710

	Entry
Mississippi—Continued	
mineral industry, minerals year-book chapter	20959
oil productive formations, analysis of brines	5493
population, 1960, characteristics	16884
post study, wood preservatives comparison, 1963 progress report	12167
precipitation data, hourly	3771
public school finance program, 1961-62	17386
ZIP code directory	20048
Mississippi River and Valley:	
central valley wooded slopes, sealing farm ponds	14833
harbors between mouth of Missouri River and Minneapolis, Minn., engineer report—	
departmental edition	2218
document edition	1981
light lists and other marine aids, Mississippi River system	6042
Muscantine, Iowa, project, modify for public park purposes, report	18906
navigation project, engineer report—	
departmental edition	435
document edition	264
stages and discharges, 1961	16350
surface water quality—	
lower basin	20739
upper basin	20743
transportation lines on river system	20652
upper, zinc-lead district, geology (series)	10281
urban areas of Illinois, flood control, engineer report—	
departmental edition	438
document edition	267
urban areas of Illinois and Wisconsin, flood control, engineer report—	
departmental edition	437
document edition	226
waterborne commerce, 1962	19148
Mississippi River Delta:	
hurricane survey, engineer report—	
departmental edition	436
document edition	262
Mississippi River, Upper, Wildlife and Fish Refuge, see Upper Mississippi River Wildlife and Fish Refuge.	
Mississippian Plateau, ground-water reconnaissance of Kentucky region	12233
Missoula Valley project, reclassification of land of Big Flat unit, Jan. 1963, approve	19028
Missouri:	
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics	4567
climatological data	3517
counties—	
forest area	6507
timber volume	15560
county business patterns, activities covered by OASDI program	15050
errata	18673
diversified milk plants, production cost of cottage cheese and frozen desserts	14872
electric rate book	15496
farm ponds, sealing in Ozark highlands, etc.	14833
5B redevelopment area, statistical profile	13368
mineral industry, minerals year-book chapter	1215
population, 1960, characteristics	16885
precipitation data, hourly	3771

# INDEX 1963

	Entry
Missouri—Continued	
public school finance program, 1962-63	10077
weather stations, decadal census	16674
ZIP code directory	20049
Missouri Basin Inter-Agency Committee:	
minutes—	
127th meeting	7227
128th meeting	9137
129th meeting	16351
130th meeting	20975
Missouri Pacific R.R., accident	14079
Missouri River and Valley:	
Fort Randall flood-control tunnel	
10, flow characteristics	13886
mineral resources, importance	1195
progress	4112
surface water quality	20743
water supply outlook and snow surveys for upper basin	4287
Missouri River basin, <i>see</i> Missouri River and Valley.	
Missouri River Basin project:	
additional units, increase appropriations to construct reports	11792, 13558
Ainsworth unit, Sandhills Division, general information	16548
Anchor Dam, technical record of design and construction	7419
Fremont Canyon powerplant and power conduit, technical record of design and construction	11256
Garrison diversion unit, construction, hearing	15387
North Loup division, Interior Dept. report	238
Mistletoe:	
dwarfmistletoe—	
survey, northeastern Washington	10213
susceptibility of Black Hills ponderosa pine	17487
MIT nuclear reactors, <i>see</i> Reactors (atomic).	
Mitchel Air Force Base, negotiated sale of Mitchel Field, hearing	8113
Mitchell, George E., salaries of dental personnel in State health departments, 1962	9354
Mitchell, George W.:	
remarks—	
Dec. 11, 1962	527
Mar. 13, 1963	6440
May 6, 1963	10183
May 13, 1963	10181
June 4, 1963	12123
Sept. 6, 1963	17433
Sept. 27, 1963	19207
Mitchell, Glenn A., performance of supersonic ramp-type side inlet, etc.	5523
Mitchell, James P., remarks, Mar. 4, 1963	7138
Mites:	
cheese, temperature and humidity effects on	9581
public health importance and their control, training guide	14668
Miticides, polybutenes evaluation	1624
Mitosis, inhibition induced in grasshopper neuroblasts by exposure to ozone	16799
<i>see also</i> Karyokinesis.	
Mitral valve, phonocardiography, etc., significance in investigation of mitral lesions, USSR study	2968
Mixson, John S.:	
1962	11623
Mittens, current industrial reports, lateral vibration characteristics of model of Saturn SA-1	5592

	Entry
Mittens—Continued	
vibration characteristics of pressurized thin-walled circular cylinders, etc.	10946
Miyakawa, Tatsuo A., licensing and exchange controls in Japan	2388
Miyamoto, Kenji, remarks, Nov. 15, 1962	5152, 15192, 20401
Miyata, Noriyuki, relief	18979, 20401
Miyauchi, David, annual report on radiation of fish	18595
Moak, James E., pine lumber industry in Mississippi	1469
Mobile, Ala.:	
electric facilities of area, map	522
principal electric facilities, map	2266
Mobile homes, <i>see</i> Trailers.	
Mobile spectroscopic laboratory for reconnaissance and exploration	10946, 298
Mobile trade fairs, hearing	298
Mobility and worker adaptation to economic change in United States	18016
Mobley, Thomas C.:	
union wages and hours—	
building trades, July 1, 1962 and trend 1907-62	12804
local transit operating employees	7169, 14472
printing industry	14472
Mock, Bette M., annotated meteorological bibliography for secondary schools	11379
Model Reporting Area for Blindness Statistics:	
conference proceedings, 1962	5626
purpose, development, etc.	11106
Model Reporting Area for Mental Hospital Statistics, development, purpose, program	5623
Modeling of thought processes, USSR	10574
Modern mathematics and your child	15434
Modern science and your child	19105
Modernization, <i>see</i> Renovizing.	
Modernization of dual-compensation and dual-employment laws	17181
Modes of control	1315
Modoc County, Calif., disclaim title of U.S. to certain property	20461
Modular design, <i>see</i> Design (Industrial).	
Modulators, <i>see</i> Light modulators.	
Modulus of elasticity, <i>see</i> Elasticity.	
Moessner, Karl E.:	
accuracy of ground point location from aerial photographs	17481
aerial volume tables for—	
conifer stands in Mountain States	20697
pinon-juniper stands	4983
test of aerial photo classifications in forest management-volume inventories	13990
why not use blueprints	17480
Mohair, production and value, 1962	9445
Mohammedanism, sacred scriptures, Soviet critique	5424
Mohave Mining & Milling Co., mining and milling methods and costs	5472
Mohler, Stanley R., civil aeromedical research, responsibilities, aims, and accomplishments	4505
Mohr, Fred W.:	
industry wage surveys—	
footwear	10908
machinery manufacturing, Mar.-June 1962	9061
women's and misses' coats and suits	14477
Moisture:	
effects of temperature and humidity on cheese mites	9581

	Entry		Entry
Molsture—Continued		Molybdenum—Continued	
humidity and storage effects on maintenance of quality of rough rice-----	9580	electrodeposition in organic solvents-----	19873
regain of cotton yarns, standard of trade-----	13259	kinetics of oxidation in Mo-Si system-----	7589
seasonal fluctuations in pocosin vegetation-----	10245	minerals yearbook chapter-----	18084
Molsture meters:		molybdenum and alloys of refractory metals, USSR experiments-----	7016
comparison with oven method in determining moisture content of grain-----	18379	Mo-W alloy components, ionization extent, USSR study-----	19708
converting peanut moisture readings, 1962-63-----	18378	report, monthly-----	3906
electric, for wood-----	19253	technical aspects, translation-----	14592
neutron, determining slope of calibration curves-----	8302	Molzon, Arnold E.:	
Mojave B Aerial Gunnery Range:		health hazards and toxicity of plastics, bibliography-----	347
public lands, withdrawal—		subject index, bibliography, and code description of technical conference papers on plastics-----	1873, 17353
law-----	20442	Moments, effect on elastic shell of arbitrary shape, USSR study-----	19386
reports-----	9879, 19027	Moments of inertia, space vehicles, spinning, use of inertia sphere to damp angular motions-----	1324
Mojave Desert, geology and mineral resources (series)-----	10276	Momentum, <i>see</i> Motion.	
Mokelumne River:		Monarca, Gluseppa R., relief-----	13681
Camanche Reservoir flood control, engineer report-----	401	Le Monde (periodical):	
department edition-----	224	index-----	787, 2667, 5110, 5413, 8761, 8889, 10788, 14347, 15762, 17734, 20892.
Molar surgery, <i>see</i> Exodontia.		Monetary policy, <i>see</i> Money.	
Molasses:		Monetary statistics, <i>see</i> Money.	
market news-----	3905	Money:	
annual summary 1962-----	5783	and bank credit, 1962-----	6438
Moldavian Soviet Socialist Republic, conferences, congresses, etc., 3d oncological and 4th conference of roentgenologists and radiologists-----	19533	and exchange rates of foreign countries-----	2278
Moldstad, John A., sources of information on educational media-----	15447	banking and monetary statistics, 1962-----	8257, 12119
Molecular biology, <i>see</i> Biology.		supplements-----	2275-78, 6439
Molecular compounds, polymers with inorganic main chains, USSR studies-----	15906	banks and monetary system-----	2275
Molecular sieves, <i>see</i> Adsorbents.		circulation statement-----	3514
Molecules:		code of Federal regulations-----	6430
calculation in spectroscopy, USSR study-----	2973	Colombian peso devaluation, connection with border smuggling, Ecuadorian comments-----	1005
correction of dissociation energies of gaseous molecules and heats of vaporization of solids, homonuclear diatomic molecules-----	9638	counterpart funds and AID foreign currency accounts-----	3569
diatomic, in ternary mixture with dissociated atoms and inert gas, unsteady diffusion with recombination-----	7278	currency, banking and monetary statistics, supplement-----	6439
gas, ion source, generates ions through impact ionization-----	14923	demand deposits adjusted, and currency outside banks-----	3592
interactions of 2-component liquid systems, dielectric studies, Poland-----	6914	fiscal and monetary policy, proceedings of conference, sponsored by President's Advisory Committee-----	3257
spectroscopy, molecular, USSR study-----	10773	flow of funds seasonally adjusted—foreign currencies—	2271
<i>see also</i> Tetrapyrrois.		acquired without payment of dollars, examination of semi-annual consolidated report of balances as of June 30, 1962, GAO report-----	19279
Moline, Ill.:		budget provision-----	13463
occupational wage survey—		foreign exchange rates—	
departmental edition-----	5445	monthly-----	3723
document edition-----	4701	weekly-----	3724
Quad-City Airport, weather observations, hourly, decennial census-----	20233	monetary developments, 1st half '63-----	15505
Mollusks:		monetary policy and international payments (remarks)-----	2272
overgrowth of Dreissena, protecting hydraulic installations, USSR study-----	12515	monetary policy, recent changes and balance of payments problems, hearings-----	17166
overgrowths on hydroelectric station structures, USSR study-----	10774	monetary system, consolidated condition statement-----	3469
<i>see also</i> Rapana.		open market rates-----	3989
Molnar, Ferenc, relief-----	17082	Philippine pesos, deposit of, agreement with Philippines-----	9431
Molybdenum:		strengthening international monetary system (remarks)-----	20216
alloy extrusion development program-----	5870	transportation by Post Office Dept., efficiency, etc., report-----	7967
and molybdenum-niobium alloys, metallurgy, literature search-----	18590		
concentrates, rhenium volatilization, USSR study-----	14331		

# INDEX 1963

Entry	Entry
Money—Continued	
velocity, sectoral analysis.....	2274
what kind do you need?.....	7426
see also Gold (money).	
Money orders, agreement with Thailand .....	1519
Mongolia:	
border treaty with Chinese People's Republic, translation.....	12369
capital construction.....	6725
civil code.....	12430
Communist party functions and activities .....	12504
crime prevention.....	12461
economic development, 1961.....	6904
entomological research.....	17630
freight shipments to, international regulations, Austrian study.....	19421
geographic characteristics, Air Force pamphlet.....	13202
Government, articles.....	5334
Inner—	
achievements in economic and cultural construction, statistics.....	2760
Autonomous Region, agricultural and animal husbandry production, status, research.....	10680
primitive society of Owenke, Communist China study.....	2650
international Communist developments, translations.....	7077, 8614, 8699
judicial structure and civil code.....	12593
Judicial system of Mongolian People's Republic.....	2794
laws and regulations concerning State finances.....	10699
local government organs.....	5248
People's Great Hural, deputies elected, list.....	15728
People's Revolutionary Party, review of 40 years achievements .....	868
planning state and cooperative commercial commodity fund.....	2807
political and economic information .....	5221
press and radio functions.....	12460
progress under invincible banner of Leninism.....	14204
six thousand kilometers traveled, notes on geography and everyday life of country.....	8831
translations .....	819, 1058, 2455, 2775, 5318, 6982, 7068, 8730, 10633, 12710, 12757, 14243, 14419, 15728, 16072, 16171, 17709, 17862, 17894, 17999, 19529, 19578, 20836
youth activities.....	12459
Mongolian People's Republic, see Mongolia.	
Mongolism:	
families of mongoloid children.....	7770
mongolismo, esperanza con la investigación .....	18286
Mongoose, bamboo trap.....	19245
Monitoring:	
aerospace medical, of physiological data, digital readout technique.....	7635
in-core power detectors, instrumentation development program.....	16846
physiological, techniques, fundamentals .....	20301
radiology, in shelters, etc., handbook .....	16934
see also Radiation monitoring.	
Monkeys, squirrel, stereotaxic atlas .....	7318
see also Baboons.	
Monocalcium aluminates, solubility characteristics .....	19866
Monochromator wavelength modulator .....	14989
Monocethanolamine, chemistry, review of physical properties, etc.....	3222
Monographs:	
social science bibliography—	
Denmark, 1945-61.....	7764
Iceland, 1950-62.....	1900
Monographs, see also names of departments, etc., issuing monographs—also subjects.	
Monolayers, see Monomolecular films.	
Monomolecular films:	
fatty amine monolayers investigation by contact potentials.....	11166
protein, structure and surface properties .....	18245
surface viscosity on water at low film pressures, literature survey .....	12949
Monomoy National Wildlife Refuge, general information.....	555
Monopolies:	
administered prices, compendium of public policy.....	10018
Antitrust and Monopoly Subcommittee activities, 1962, report.....	9980
antitrust laws, administration, investigation, authorization, report .....	6275
Clayton act, amend, hearings.....	12025
manufacturing industry, concentration ratios, 1958.....	2097, 8078, 9984
print additional copies, reports.....	11863
reprint pt. 1, report.....	
Monroe, G. E., machine for picking up filled grape boxes.....	14836
Monroe, James, papers, index.....	19811
Monroe County, Ill.:	
Columbia Drainage and Levee District no. 3, engineer report—	
departmental edition.....	2192
document edition.....	1987
Richland Creek, engineer report—	
departmental edition.....	454
document edition.....	268
Monsoons, east Asia, problems concerning winds.....	14277
Montana:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics.....	4571
Christmas tree exports, decline for 3d straight year.....	20698
Clark Fork area, commercial timber management.....	6487
climatological data.....	3517
county business patterns, activities covered by OASDI program.....	15054
errata.....	18677
Duck Creek Pass quadrangle, geology .....	12221
electric rate book.....	509
5B redevelopment area, statistical profile .....	11690
geology of Clark Fork quadrangle, mineral industry, minerals yearbook chapter.....	17523
population, 1960, characteristics.....	3064
precipitation data, hourly.....	11609
public school finance program, 1962-63.....	3771
water supply outlook and snow surveys .....	19114
weather stations, decadal census.....	4287
western, forest resources.....	16675
ZIP code directory.....	17502
Montauk (steamship):	
United States-flag commercial vessel under cargo preference law, hearings .....	20050
	2087

	Entry
Montauk Point, fresh ground water, availability in area.....	14031
Montauk Point, N.Y., to Manasquan, N.J., coastal warning facilities chart, 1963.....	18116
Monte Carlo method: error analysis of space vehicle position fix in earth-moon trajectories.....	12878
j-values of s-type neutron resonances by multiple scattering.....	12955
Montemayor, Pedro B., Jr., relief.....	15210, 20565
Montezuma National Wildlife Refuge, general information.....	19238
Montgomery, R. L., heat of solution of cerium metal in hydrochloric acid.....	3100
Montgomery, Ala., Dannelly Field, weather observations, hourly, decennial census.....	14782
Montgomery Blair, Postmaster General.....	11208
Montgomery County, Md., rural fringe and urban expansion, case study.....	19089
Month-end storage in major reservoirs in Pacific Northwest.....	4212
Monthly: NOTE.—For all publications which begin with the word Monthly, see subject, or name of department issuing publication.	
Monticellite, P-T univariant equilibria of reaction forsterite + calcite-monticellite + periclase + CO <sub>2</sub> , experimental studies on Bowen's decarbonation series, II.....	16385
Montmorillonite, hydrogen, dual acidity and structure.....	14023
Montpellier, Vt., District Court term to be held, report.....	9969
Montross, Lynn, U.S. marine operations in Korea 1950-53 east-central front.....	1194
Monument no. 2 mine, ore deposit, mineralogy and paragenesis, Monument Valley area.....	12220
Monument Valley: Arizona and Utah area buried channels, geophysical methods of exploration.....	597
geology and uranium-vanadium deposits of area, Apache and Navajo Counties, Ariz.....	12220
serpentine at Garnet Ridge.....	12220
Monuments, see names of places where located.	
Moody, Frederick J., probability theory and core design.....	14974
Moon:	
abort from manned lunar landing and return to rendezvous in 50-mile orbit.....	1306
America's manned space flight program, general information.....	12844
ascent from lunar surface.....	12852
astrodynamic constants.....	14547
circumlunar missions, transition matrix assumptions in navigation theory.....	20980
dust nature of lunar surface, USSR study.....	15801
earth moon trajectories, geometrical characteristics of lunar orbits.....	11057
facts and theories about moon, general information.....	16413
flight to moon by rocket-mastodon or orbital rendezvous, USSR study.....	5397

	Entry
Moon—Continued	
handling qualities and trajectory requirements for terminal lunar landing, analog simulation.....	16396
Hansen's lunar theory, modification.....	12868
Hill's lunar theory, remarks on.....	7253-54
lunar charts—	
earthside hemisphere.....	5878-79
LAC 56, Hevelius.....	13210
LAC 59, Mare vaporum.....	9618
LAC 60, Julius Caesar.....	1771
LAC 61, Tarantius.....	7619
LAC 74, Grimaldi.....	7620
LAC 77, Ptolemaeus.....	13211
LAC 78, Theophilus.....	9619
LAC 79, Colombo.....	11508
LEM-1B, wall mosaic.....	16781
lunar flight study series, trajectories in earth-moon space with symmetrical free return properties.....	12883
lunar mission—	
effect of lift on separation distance and loads for aborting vehicle.....	11055
parameter study of insertion conditions including trajectory conditions.....	19944
requirements, influence of precision of earth rendezvous orbits.....	1304
vehicle position in earth-moon trajectories.....	12878
lunar orbit descents, analog study.....	3143
lunar-orbit-rendezvous scheme, parametric investigation.....	11025
lunar origin of tektites.....	5584
lunar return mission, analysis.....	16403
marginal zone.....	19987
mission, prediction of velocity requirements for minimum time aborts from midcourse region.....	11039
natural and induced environments encountered in interplanetary space and methods of simulation, investigation.....	4392
occultations of radio sources, 1963-64.....	21029
orbits returning from moon to specified geographic landing area.....	11038
probes, periodic orbits.....	5909
soils, evaluation of infrared spectrophotometry for analysis.....	9180
spacecraft returning, emergency midcourse navigation procedure.....	7291A
surface ballistics and hazards associated with spacecraft landing or launch operations.....	7250
television photography, USSR study.....	15857
thermal emission measurements.....	50
trajectories, entry conditions at lunar sphere of influence applicable to near-moon trajectory and impact conditions.....	14563
Mooney, H. William, methodology in 2 California health surveys, San Jose, 1952, and statewide, 1954-55.....	13024
Moore, Bernice M., education for home and family living.....	13846
Moore, Betty M., crude petroleum and petroleum products, 1961.....	1199
Moore, George E., Jr., bedrock geology of Coventry Center quadrangle, R.I.....	19298
Moore, James G., geology of Mount Pinchot quadrangle, southern Sierra Nevada, Calif.....	10283
Moore, L. A., feed additives, minerals, and vitamins for dairy cattle.....	14837



# INDEX 1963

	Entry		Entry
Moore, Margaret L., relief-----	13513, 19003, 20417	Morphology—Continued	
Moore, Muriel S.:		burns, central nervous system	
contribution of imports to U.S. food		changes, USSR study-----	17983
supplies, 1961, and comparisons	8388	dolphin, ultrasonic and sonic de-	
with 1957-60-----		tection characteristics, USSR	
exports in relation to U.S. produc-		study-----	17980
tion, 1962-----	17561	frog, oocytes, quantitative data,	
Moore's Creek National Military Park,		USSR study-----	17922
general information-----	9242	morphological characteristics of	
Moosehorn National Wildlife Refuge,		Microtus hyperboreus, USSR	
birds-----	4961	study-----	16261
Moral strength in business, address-	6049	Morrell, Gerald, rate of liquid jet	
Morbidity:		breakup by transverse shock	
data sources-----	5696	wave-----	11048
lung cancer, in relation to air pollu-		Morrill, C. S., programmed instruc-	
tion, USSR study-----	5396	tion, selected bibliography-----	18486
morbidity and mortality weekly re-		Morrill act, <i>see</i> Land-grant colleges.	
port-----	3931	Morris, Charles W., gnoseological	
population, generalizing reported		theory of pragmatism and sem-	
data, USSR study-----	2547	iotics, USSR-----	10471
Morbidity, <i>see</i> Diseases of animals.		Morris, J. Carrell, advanced waste	
Morgan, D. T.:		treatment processes-----	11245
irradiation of Santowax OMP in		Morris, James F., dispersion and	
M.I.T. in-pile loop-----		damping of longitudinal electron	
design equipment, etc-----	4483	oscillations in thermal	
summary-----	4482	plasmas-----	12867
Morgan, Howard E., motels, bibliogra-	1488	Morris, Joe P., examination of experi-	
phy-----		mental iron blast furnace after	
Morgan, Ira L., apparatus for partial		quenching with nitrogen-----	10951
cell irradiation-----	16796	Morris, Odell A.:	
Morgan, Reese R., inorganic chemicals		aerodynamic characteristics in pitch	
and gases, 1961-----	1892	of Mach number of 2.01 of	
Morgan, Roy L.:		wing-body combinations with	
addresses-----		wedge-shaped bodies, etc-----	14565
Jan. 22, 1963-----	4654	flow angles, measurements in vi-	
Mar. 7, 1963-----	6044	cinity of 2 lifting configura-	
Apr. 17, 1963-----	7809	tions-----	11035
Oct. 8, 1963-----	18747	supersonic store interference, dela-	
Nov. 1, 1963-----	20390	tating heavy-bomber configura-	
Morgan, Thomas A., determining		tion-----	18117
stress in rock-----	20969	Morrison, D. G.:	
Morgan, William C., elastic stress dis-		State formulas for support of pub-	
tributions for junctions in pres-		lic 2-year colleges-----	386
surized shell structures-----	5587	2-year community college, unpub-	
Morgan City, La. to Apalachicola,		lished studies and surveys,	
Fla., coastal warning facilities		1957-61, annotated list-----	20645
chart-----	5770	Morrison, W. W., fresh cabbage, from	
Morgan City, La., to Brownsville,		grower to retailer-----	33
Tex., coastal warning facilities		Morrison formation, <i>see</i> Jurassic	
chart, 1963-----	14777	period.	
Morgan County, Ky.:		Morrison-Knudsen Co., Inc., equip-	
coal geology of Seitz quadrangle---	598	ment rentals in construction	
geology and coal resources-----	10274	of White Alice communica-	
Moriya, Misako, relief-----	11940	tions system, GAO examina-	
Mormon Slough:		tion-----	10260
Calaveras River, flood control, en-		Morriss, E. Frances, cotton statistics.	9588
gineer report-----		Morse code, <i>see</i> Cipher and telegraph	
departmental edition-----	4866	codes.	
document edition-----	4686	Mort, Kenneth W., aerodynamic char-	
Morocco:		acteristics of full-scale propel-	
Agadir and Meknes Provinces,		ler tested with both rigid and	
demographic, geographic and		flapping blades and with cyclic	
economic data-----	5299	pitch control-----	11054
agricultural commodities, agree-		Mortality, <i>see</i> Death.	
ment-----	7447	Mortgage insurance:	
economy, basic data-----	8378	dealers and individuals subject to	
fact sheet-----	20143	certain sections of title 1, Na-	
foreign trade regulations-----	15651	tional housing act, list-----	8232
living conditions-----	10336	FHA financing for home purchases	
preparing shipments to-----	6618	and home improvements,	
provinces, demographic, geographic,		guide-----	4894
and economic data, transla-		FHA for urban renewal, fact sheet.	10153
tions-----	2873	FHA program for urban renewal	
Spanish Sahara boundary, study---	20154	housing, need to revise proced-	
youth, problems (speech)-----	20788	ures in administration, GAO	
Morphology:		report-----	20718
animals, changes of bone tissue		home-----	
nerves in radiation sickness,		FHA data for States, report-----	10152
USSR study-----	17662	FHA fact sheet-----	6404
antibiotics olivomycin and krutsin,		FHA regulations, amendments---	503-
action on cells of ascitic form		504, 4895-96, 10154, 13910, 15487,	
of Erlich's tumor, USSR		19176-179.	
study-----	6704		

	Entry		Entry
Mortgage insurance—Continued		Morton, L., electron optical studies	
home—Continued		of low-pressure gases.....	16420
mortgage transactions—		Morton, Louis, war in the Pacific,	
data for selected areas.....	10151	strategy and command.....	9107
FHA data—		Morton National Wildlife Refuge,	
selected housing areas, pro-		birds.....	13970
posed homes.....	12108	MOS, <i>see</i> Military occupational spe-	
States, proposed homes.....	12109	cialties.	
homes—		Mosaics:	
AEC employees, extend author-		lunar reference, earthside hemi-	
ity—		sphere.....	5878-79
law.....	18774	lunar wall mosaic.....	16781
report.....	17285	Moscoco, Teodoro, address, Feb. 15,	
NASA employees, extend author-		1962.....	12260
ity—		Moscow, Russian SFSR:	
law.....	18774	changes in fungal flora over a 15-	
report.....	17285	year period.....	996
housing, digests.....	4892, 17430	enterprises, universal assembly de-	
liberal financing for sales and		vices.....	14215
rental housing, extend time—		executive committee, enterprises,	
law.....	13428	etc., transferred to sovnarkhoz,	
reports.....	11847, 13741	list.....	15891
minimum property standards for		Pervomayskiy Rayon, general	
urban renewal rehabilitation.....	13913	characteristics.....	7028
mortgagee's handbook, home pro-		railroad guide, Moscow, Caucasus.....	15847
grams, FHA manual, revisions.....	4899, 6405	rayons, general information.....	12764
multifamily—		Moscow-Chop railroad guide.....	12402
FHA underwriting procedures		Moscow-Crimea railroad guide.....	10824
manual.....	19185	Moscow Engineering Physics Insti-	
rental, eliminate limitation to		tute, scientific conference, 1962.....	5189
cost of physical improvements		Moscow manometer plant defines new	
requirement, report.....	15285	goals, USSR.....	2616
nursing homes, FHA program.....	15490	Moscow State University, physics	
project, FHA regulations—		5-year program, analysis.....	8174
amendments, 4897-98, 8234, 19180-183		Moscow-Vladivostok railroad guide.....	12441
revisions.....	15488	Moseley, William C., Jr., effect of con-	
Mortgages:		trol trailing-edge thickness,	
farm—		etc.....	14536
lending experience of life insur-		Moses, Earl R., relatives in house-	
ance companies, etc.....	2136,	hold of mother-child benefi-	
	15422	cary groups under old-age and	
mortgage act, etc.....	213	survivors insurance.....	9303
mortgage debt by States, 1950-		Moses H. Cone Memorial Park, gen-	
62.....	12052	eral information.....	5639
recorded, characteristics, Jan.-		Mosquitoes:	
Mar. 1961.....	17355	control, new measures, USSR	
FHA experience with foreclosures		study.....	15849
and property acquisitions, re-		public health importance and their	
port.....	4893	control, training guide.....	20109
home—		repellents—	
economical financing, today and		factors affecting protection pe-	
tomorrow (address).....	19171	riod.....	13189
estimated debt and financing ac-		orally effective, progress report.....	14950
tivity.....	3629	Motels, bibliography.....	1488
FHA trends, quarterly reports.....	4130	<i>see also</i> Motor courts.	
interest rates and terms.....	10148	Mother Benedetta, <i>see</i> Merghetti,	
programs, mortgagee's handbook,		Maria.	
FHA manual, revisions.....	4899, 6405	Mother Cherubina, <i>see</i> Colombo,	
voluntary credit program.....	19342	Annunziata.	
homes, ability to pay, FHA mort-		Mothers:	
gage credit analysis guide.....	501	and children beneficiary groups	
interest rates on conventional		under old-age and survivors	
loans, largest insured savings		insurance, relatives in house-	
and loan associations, sum-		hold, national survey.....	9303
mary.....	3932	attitudes, relation to influence of	
market, present problems (re-		breast feeding on children's be-	
marks).....	10183	havior.....	15094
nonfarm investments of life in-		health services, grants to combat	
surance companies, 1962.....	15485	mental retardation—	
nonfarm real estate foreclosure		law.....	20487
report.....	3970	reports.....	15275, 17118, 19017
recording letter.....	3933	maternal and child health services,	
residential finance, homeowner		1960, statistics.....	4599
properties, census, 1960.....	4574	maternal care in fallout shelters.....	11643
savings and mortgage activity, se-		unmarried, use of social services.....	6011
lected balance sheet items.....	3745	working—	
savings and mortgage lending ac-		who are working mothers?.....	13134
tivity.....	3451	why mothers work, review of	
<i>see also</i> Agricultural credit—Loans.		data, 1940-62.....	20256
Morton, Conrad V., revision of Tri-		Moths:	
chantha (Gesneriaceae).....	19975	genus Aceleris, North American.....	11115
Morton, James G., remarks, June 25,		gypay, determining sex of fully de-	
1963.....	13348	veloped embryos and early-in-	
		star larvae.....	10233

# INDEX 1963

	Entry		Entry
Moths—Continued		Motor fuel:	
winter, general information.....	14885	aircraft and vehicular, storage, distribution, and dispensing, engineering and design manual, change.....	433
Zimmerman pine moth in Michigan, natural mortality.....	12172	flight vehicle combustibles, fire and explosion hazards, review.....	5470
see also Codling moths—Tip moths.		motorboat, transfer to land and water conservation fund, hearing.....	15338
Motion, momentum accommodation of N <sup>+</sup> , N <sup>2+</sup> , and A <sup>+</sup> incident on copper and aluminum from 0.5 to 4 kev.....	19032	ram-jet engine, pentaborane investigation.....	5518
see also Equations of motion.		see also Gasoline.	
Motion pictures:		Motor oils, see Lubricants.	
aeronautics and space—		Motor trucks, see Motortrucks.	
adult, list.....	19886	Motor vehicle accidents:	
elementary grades, list.....	19884	collisions in D.C., report to police, report.....	6158
secondary grades, list.....	19885	investigation reports.....	637
Agriculture Department—		2449, 8431, 14076-77, 15659, 17569, 19387.	
1963 cumulative supplement.....	11447	mechanical defect, 1959-61, analysis.....	5100
monthly list.....	3916	persons injured, and associated disability, U.S., July 1959-June 1961.....	7402
USDA films for television.....	14881	rail-highway grade crossing accidents, 1962.....	19368
cancer film guide, 1963.....	16492	Motor vehicle operators, emergency preparedness.....	14078
child life, list.....	1927	Motor vehicles:	
civil defense catalog.....	18715	air pollution, and public health.....	1413
copyrighted—		automotive exhaust catalysts, effect of lead deposits on.....	14509
July-Dec. 1961.....	2110	automotive industry in United States and western Europe, USSR report.....	8535
Jan.-June 1962.....	2109	automotive parts wholesaling, Federal wage-hour law application.....	5766
July-Dec. 1962.....	13829	buses, Soviet price list.....	15804
Federal safety films, list.....	15508	combat—	
Government programs, key personnel, directory.....	2158	defective rocker arm assemblies, procurement from Hawk Tool & Engineering Co., Clarkston, Mich., by Army Dept., GAO review.....	19285
Interior Department catalog.....	8368	ineffective repair parts support by Army Tank-Automotive Center, Detroit, Mich., GAO review.....	8315
Library of Congress catalog.....	3865	District of Columbia, annual inspection act, amend, report.....	13738
medicine and allied sciences, film reference guide.....	14662	emergency towing, exemption from interstate commerce act—	
neurological and sensory disease, film guide.....	16514	hearing.....	13658
production facilities of colleges and universities, survey report.....	12068	report.....	13590
Public Health Service film catalog.....	16518	emissions and their effects, conference report.....	1412
Public Roads Bureau, films available.....	3301	employee earnings at retail dealers—	
see the West reclaimed, films available for educational purposes.....	18298	departmental edition.....	3028
utilization under national defense education act, news and reports.....	15452	document edition.....	2012
Motivations of youth for leaving school.....	19095	environmental factors affecting ground mobility in Thailand.....	13888
Motive power, see Power.		exhaust discharges, effect on human health, Surgeon General to study, hearings.....	11907
Motor buses, see Motor vehicles.		Federal item identification guides for supply cataloging, supplements.....	3652
Motor carrier decisions, see Interstate Commerce Commission.		fuels, storage, distribution, and dispensing, engineering and design manual, change.....	433
Motor carriers:		Government employees in Alaska, transportation of private vehicles—	
certain employees exemption from maximum hours, Code of Federal regulations.....	16647	hearing.....	15311
class 1, revenues etc.—		report.....	18852
passengers, quarterly.....	4154	Government passenger carrying, establish safety standards, report.....	13592
property, quarterly.....	4155		
class 2, revenue, etc., property, quarterly.....	4185		
cost study of general freight transportation.....	5101-3, 8430		
East-South territory.....	10352		
eastern-central territory.....	10353		
south-central territory.....	10355		
southern region.....	10354		
electronic computers, use in planning motor transport, USSR study.....	17864		
for-hire, hauling exempt agricultural commodities, nature and extent of operations.....	4362		
property, class 3, statistics, 1961.....	19371		
transport statistics, 1961.....	641, 5107, 14081		
transportation acts amendments, 1962, hearings.....	2054		
see also Motor vehicle accidents.			
Motor courts, starting and managing small motel.....	14690		
Motor cycles, see Motorcycles.			

# JANUARY-DECEMBER

	Entry		Entry
Motor vehicles—Continued		Mount Hope Bay :	
Illens, alphabetical file by D.C. Recorder of Deeds, eliminate—		bridge, Rhode Island to maintain, operate, etc.—	
law	17019	law	18785
reports	13625, 13733	reports	17250, 18861
military, automotive assembly, engineering design handbook	7664	Mount Pinchot quadrangle, southern Sierra Nevada, geology	10283
preventive maintenance, guide	7479	Mount Prospect, Ill., population, special census	5999
quarry transport, planning, etc., USSR study	15843	Mount Rainier National Park, general information	9243
Russian-English glossary, motor-transport, etc., terms	12690	Mount Rushmore National Memorial, general information	5640
seat belts sold or shipped in interstate commerce, meet safety standards, reports	11839, 13586	Mount Sinai Hospital, social service department, study of use of social services by unmarried mothers	6011
transport facilities, protection and restoration in national emergency	14078	Mountain farming, see Agriculture.	
used in interstate transportation of migrant workers, ICC regulations	12269	Mountain Fork River :	
USSR industrial development, translations	2099, 19724	Broken Bow Reservoir project, engineer report—	
world production and registration, 1961-62	7744	departmental edition	400
see also Vehicles.		document edition	322
Motorboats, fuel, taxes transferred to land and water conservation fund, hearing	15338	Mountain hemlock, see Hemlock.	
Motorcycles, USSR industrial development, translations	14389	Mountain States, see Rocky Mountain States.	
Motorists, spacometer, safety device aid, development, hearing	18951	Mountains :	
Motors :		Carpathian Ruthenia area, USSR tourist handbook and guide	12675
expandable chamber type, classification bulletin	16475	West Virginia, four forest practices, effect on streamflow	10238
motors and generators, current industrial reports	13290	Mourning doves, see Pigeons.	
see also Electric motors—Outboard motors.		Mouse, see Mice.	
Motortruck drivers and helpers, union wages and hours	12805	Mouth :	
Motortrucks :		oral hygiene—	
cargo, defective canvas end curtains, procurement by Army, GAO review	10268	effect of closely supervised program upon oral cleanliness	7190
combination runway foaming-tanker vehicle for fire fighting	18238	selecting method for use in space cabin simulator flights	5890
farm trucks, complete-opening endgate for faster unloading of grain	7570	Moyer, Forrest T. :	
for livestock trucking, safety-checking	8206	coal, Pennsylvania anthracite—	
industry, outlook for 1963 and review of 1962	5972	employment and injuries—	
M35 trucks, failure of Army to store in covered storage space, unnecessary costs incurred, GAO review	10270	fuel industries	19829
operations of farmer cooperatives—	10099	metal and nonmetal industries	19830
production report, monthly	3917	mineral industry	20946
USSR industrial development, translations	8744, 16127	Moyers, Bill D., nomination, hearing—	4775
see also Utility trucks.		Moynihan, Daniel P. :	
Motortrucks in freight service, costs of operating exempt for-hire motor carriers of agricultural commodities, pilot study in Delaware, Maryland, and Virginia	8152	addresses—	
Moundroukas, Vasiliki, relief	7894	July 10, 1963	14432
Mount, see name of mountain, except when "Mount" occurs as first word of name of town, etc.		Sept. 26, 1963	19776
Mount Carmel, Ill. :		nomination, hearing	8127
Wabash River survey, flood control, engineer report—		MRL, see Aerospace Medical Research Laboratory.	
departmental edition	2225	MSTS, see Military Sea Transportation Service.	
document edition	2001	Mud daubers, see Wasps.	
Mount Fairweather quadrangle, geology of eastern part	6547	Mudge, Melville R., stratigraphy and paleontology of Pennsylvanian and Permian rocks in Kansas	8334
		Mueller, Lincoln A., lumber grade recovery from Engelmann spruce in Colorado	12190
		Muench, H. Stuart, atlas of monthly mean stratosphere charts, 1955-59, July-December	4390
		Mugler, John P., Jr., static longitudinal aerodynamic characteristics at transonic speeds of lenticular-shaped reentry vehicle	11008
		Muhlenhaupt, Richard C., carbon resistors for cryogenic liquid level measurement	21030
		Muir, K. S., water levels in observation wells in Santa Barbara County, Calif., in 1962	19320
		Muir Woods National Monument, general information	16437
		Mulching, wind and water erosion control	13156
		Mullen, D. H. :	
		mineral industry of—	
		Colorado	3061
		North Dakota	1219

# INDEX 1963

Entry	Entry
Mullets, <i>see</i> Goatfish.	
Mullidae, <i>see</i> Goatfish.	
Mulligan, John J., Mount Gran coal deposits, Victoria Land, Antarctica	12834
Mullite, low-temperature heat capacity and high-temperature heat content	19860
Multi-group diffusion methods	1835
Multiple use in action, 1960 yearbook, Department of Agriculture, Forest Service Intermountain region	580
Multiple use on Norris watershed	7473
Multi-rod burnout at high pressure	11555
Mumford, Bessie C., list of intercepted plant pests, 1962	9548
Munden, Kenneth W., records of Dominican Customs Receivership	1328
Mundorff, M. J.: ground water in Raft River Basin, Idaho, irrigation use, 1956-60	14034
reconnaissance of hydrology of Little Lost River Basin, Idaho	10297
Municipal and cooperative distributors of TVA power, 1962 annual report	5753
Municipal Court for District of Columbia: change name to District of Columbia Court of General Sessions—	
law	13434
reports	6163, 13734
jurisdiction in civil actions, increase and change name—	
law	13434
reports	6163, 13734
Municipal Court of Appeals for District of Columbia: change name to District of Columbia Court of Appeals—	
law	13434
reports	6163, 13734
Municipalities, <i>see</i> Cities and towns.	
Munse, Albert R.: public school finance program, 1961-62—	
Alabama	19111
California	6338
Connecticut	12073
Florida	13856
Idaho	12074
Massachusetts	19112
Mississippi	17386
Wyoming	17387
public school finance program, 1962-63—	
Alaska	6339
Arizona	15441
Arkansas	13857
Hawaii	19113
Illinois	15442
Indiana	17388
Iowa	12075
Kansas	12076
Kentucky	20641
Missouri	10077
Montana	19114
Nevada	6340
New Mexico	17389
New York	12077
Ohio	12078
Oregon	13858
Pennsylvania	13859
South Carolina	15443
South Dakota	15444
Utah	13860
Vermont	15445
Washington	10078
West Virginia	17390
Munson, Albert G., magnetic field of line current in transverse rarefied plasma stream	5582
Murdock, Thomas G., mineral resources of Malagasy Republic	20950
Murgel, Ana: relief	20536
Murgulescu, Ilie G., Rumanian chemist, biographic data	19593
Muricidae, <i>see</i> Rapana.	
Murphy, Charles S.: addresses, etc.—	
Jan. 15, 1963	5814
Feb. 26, 1963	7586
Apr. 3, 1963	11446
May 10, 1963	14849
June 28, 1963	14889
July 16, 1963	16734
July 18, 1963	16760
Sept. 12, 1963	20276
Sept. 24, 1963	20278
sugar and international trade	1727
Murphy, George W., behavior of ions in aqueous solutions of mixed electrolytes with respect to osmotic cell operation	14061
Murphy, John S., relief	17075
Murphy, Louise R., education directory, 1962-63, pt. 1: State governments	2155
Murphy, Robert T., address, May 6, 1963	9734
Murphy, Sandra B., relief	17087
Murphy, Timothy J., nomination, report	20543
Murray, Evelyn, counseling and employment service for youth	4833
Murray, John B.: State plans and procedures for purchasing school buses	13866
State plans for financing pupil transportation	6323
State provisions for school bus inspections, summary	13867
State supervisors of pupil transportation, directory	2170
Murray, John J., safety manual for fishermen, captains, and owners of New England fishing vessels	4942
Murray, John R., fuel temperature counter	19258
Murray, Kenneth L., France's key role in grain sector of European Common Market	10206
Murray, Samuel S., type of farm	171
Murrow, Harold N., calculation of aerodynamic forces due to continuous sinusoidal gusts on wing planforms	5575
Muscat, amity, economic relations, and consular rights, treaty, text, report	20527
Muscatine, Iowa, project on Mississippi River, modify for public park purposes, report	18906
Muscle protein, <i>see</i> Actomyosin.	
Muscles: activity during muscular work, USSR study	891
afferent and effector innervation of somatic musculature development, USSR study	19717
bioelectrical activity in occupational neuro-muscular diseases, USSR study	17976
ciliary, neural control	15022
defect replacement with tissue and protein preparations, USSR study	17984
skeletal musculature, regeneration, nucleic metabolism under roentgen irradiation, USSR study	17939
tonus under conditions of weightlessness	7298
ultraviolet fluorescence, USSR study	12377



	Entry		Entry
Muscovite, low-temperature heat capacity and entropy-----	16347	Myers, Clifford A.: estimating past diameters of ponderosa pines in Arizona and New Mexico-----	17493
Muscular dystrophy, general information, research-----	9342	estimating volumes and diameters at breast height from stump diameters, southwestern ponderosa pine-----	17495
Musen, Peter: on modification of Hansen's lunar theory-----	12868 14553	southwestern ponderosa pine, volume, taper, and related tables-----	15584
Mushrooms, growing in United States-----	7560	taper table for pole-size ponderosa pines in Arizona and New Mexico-----	1749
Musial, Norman T., overexpanded performance of conical nozzles-----	5558	Myers, Lawrence, address, May 22, 1963-----	9556
Music: books on music, classification, Library of Congress-----	10928	Myers, Robert H., suburban shopping centers-----	18308
compositions on coin-operated machines, provide royalties-----		Myers, Robert J.: actuarial cost estimates for hospital insurance bill-----	18311
hearings-----	15321	remarks-----	
reprinted, catalog of copyright entries-----	17141	Mar. 20, 1963-----	7178
Library of Congress catalog-----	339, 13827, 18057	Apr. 20, 1963-----	9082
Rumania, problems of popular music debated by Music Council-----	8795	Myers, Vance A., 3-dimensional wind flow and resulting precipitation in northern California storm-----	20246
United States, events of 1962-63 concert season, list-----	5674	Myles, Jack C., small suppliers in changing market-----	1478
Musical instruments, Federal item identification guides for supply cataloging supplements-----	3659	Myosin, see Actomyosin.	
Musick, J. T., water management, consumptive use, and nitrogen, fertilization of irrigated winter wheat in western Kansas-----	16759	Myren, Richard A., police work with children-----	175
Musil, Albina F.: identification of crop and weed seeds-----	9561 20277	Myrick, Robert M., hydraulic geometry of small tidal estuary-----	15612
Muskeg, review of research-----	1438	Myxobacteria, cellulose-decomposing, species and varieties, description, USSR study-----	12493
Muskegon, Mich.: occupational wage survey—departmental edition-----	16280	N	
document edition-----	15171	N.A.C.A., see National Advisory Committee for Aeronautics.	
port, harbor conditions, etc-----	2215	N.A.S.A., see National Aeronautics and Space Administration.	
Muskegon Heights, Mich.: occupational wage survey—departmental edition-----	16280	N.A.T.O., see North Atlantic Treaty Organization.	
document edition-----	15171	N.B.S., see National Bureau of Standards.	
Mussels, certified shippers-----	3506	N-body code, general Fortran code for solution of problems in space mechanics by numerical methods-----	3130
Mussler, Ralph E., metallothermic reduction of yttrium halides-----	16331	N.I.H., see National Institutes of Health.	
Mustard gas, combined poisoning with organic phosphorus, changes in serum cholinesterase, USSR study-----	6765	N.L.R.B., see National Labor Relations Board.	
Mustering-out payments, United States Code, title 38, chap. 43, repeal, report-----	6143	N.O.L., see Naval Ordnance Laboratory, White Oak, Md.	
Mutation, see Variation (biology).		N.R.A.B., see National Railroad Adjustment Board.	
Mutcher, Calvin K., runoff plot design and installation for soil erosion studies-----	20263	N.R.L., see Naval Research Laboratory.	
Mutual aid, see Foreign aid—Military aid.		N.R.O.T.C., see Naval Reserve Officers Training Corps.	
Mutual assistance, see Military aid.		N.S.F., see National Science Foundation.	
Mutual defense, see Military aid.		NACA see National Advisory Committee for Aeronautics.	
Mutual defense assistance, see Military aid.		Nacelles: swept-wing heavy-bomber configuration—lateral forces and pitching moments, Mach number 1.61-----	14533
Mutual interference between surface and satellite communications systems-----	16421	lift and drag, Mach number 1.61—with large store (nacelle), Mach number 2.01-----	12843 16358
Mutual security, see Foreign aid—Military aid.		wing-fuselage configurations, store interference, origin and distribution-----	12843, 14533
Muvdi, B. B., inelastic design of load carrying members-----	9637	Naeseth, Roger L., wing sweep effect on aerodynamic characteristics of parawings-----	18155
Mycobacteria, incidence in adult salmonid fishes returning to West Coast hatcheries-----	19244	Naismith Dental Group, dental plan, experiment in dental prepayment-----	5688
Mycology, see Medical mycology.			
Myers, Charles A., exportability of American system of industrial relations-----	10922		

# INDEX 1963

	Entry		Entry
Nakada, M. P., high-energy electrons in radiation belt.....	21024	Natches Trace State Forest, multiple use, demonstration.....	1570
Nam Dinh Province, Vietnam, Ho Chih Minh's speech at party chapter conference.....	15721	National, <i>see</i> headings beginning Federal—Government—National.	
Names (personal):		National Ability Counts Contest, announcement.....	1157
persons of Spanish surname, census of population, 1960.....	18701	National Academy of Foreign Affairs: establish—	
Nanchang, China, description.....	992	draft legislation, executive communication.....	18936
Napoli, Concetta P., and children, relief.....	18836	hearings.....	13805
Narcissus bulb dy, <i>see</i> Files.		recommendations of President's Advisory Panel.....	3261
Narcotic habit:		National Academy of Sciences:	
drug addiction.....	14606	report, 1960—	
problems, history, symposium.....	21033	departmental edition.....	9138
rehabilitation, report on 5-year community experiment of New York Demonstration Center.....	19966	document edition.....	8019
prevention and control.....	7228	National Accident Prevention Center, establish, hearings.....	9939
Narcotics:		National action to combat mental retardation, proposed program.....	5676
abuse in California, hearings.....	8123	National Actor's Equity Week: designate—	
abuse, proceedings of conference.....	9510	law.....	11715
decisions.....	4245	reports.....	9891, 9963
illegal traffic and its effect on juvenile and young adult criminality, hearings.....	8123, 12024	National Advisory Committee for Aeronautics, research memorandum RM series.....	1259-60, 3106-8, 5509-34, 7229-31, 10971-980, 12843, 14528-536, 16354-860, 18116-117.
limitation, etc., of poppy plant cultivation and opium use and trade, protocol.....	11306	National Advisory Council on Education for Health Professions, establish, hearings.....	17326
prescribing and dispensing under Harrison narcotic law.....	10969	National Advisory Council on International Monetary and Financial Problems:	
traffic, 1962.....	16352	increase in resources of International Development Association, special report.....	20454
<i>see also</i> Barbiturates.		report—	
NAREC, <i>see</i> Electronic computers.		July 1-Dec. 31, 1961.....	9834
Narodna armiya (periodical):		Jan. 1-June 30, 1962.....	17072
translations.....	12683	July 1-Dec. 31, 1962.....	17073
Narragansett Bay, tidal current charts.....	13334	National Advisory Council on Local Area Youth Employment Programs:	
Narraguagus River:		establish—	
engineer report—		hearings.....	8128, 9931
departmental edition.....	439	report.....	8062
document edition.....	257	National Advisory Council on Migratory Labor:	
NASA, <i>see</i> National Aeronautics and Space Administration.		establish—	
NASA AL series.....	9141, 14536A, 18118	hearings.....	10021
NASA EP series.....	5535, 12844-845, 18124, 19900-901	report.....	11973
NASA facts.....	3109-10, 5536-37, 9142, 10981, 14538	National Advisory Council on State and Community Youth Employment Programs, establish, report.....	7960
NASA Industry Program Plans Conference, proceedings.....	9143	National Advisory Council on Youth Conservation Corps:	
NASA SP series.....	1266-67, 3112-14, 5540-53, 7234-36, 9143, 10988-989, 16361, 18130-131, 19902-904, 20976.	establish—	
NASA Special Committee on Materials Research for Supersonic Transports, progress report.....	12875	hearings.....	8128, 9931
NASA-University Conference on Science and Technology of Space Exploration, principal addresses at general sessions.....	5535	reports.....	7960, 8062
Nasal allergy, <i>see</i> Allergy.		National Aeronautics and Space Administration:	
Nash, H. C., reducing surface friction of elastomers.....	18246	act of 1958, as amended through end of 87th Congress, staff report.....	324
Nash, Harry P., Jr., relief.....	17094	AL [aerospace leaflets] series.....	9141, 18118, 14536A
Nash Draw quadrangle, N. Mex., surface geology.....	6549	appropriations, 1961—	
Nashville, Tenn.		hearings.....	13670, 13789, 15332, 15371, 18919
Berry Field, weather observations, hourly, decennial census.....	11401	law.....	17043
consumer expenditures and income, 1961.....	19786-787	reports.....	15246, 15263, 15358, 17124
Naslatka, Thomas M., hydraulic coal mining research, tests in steeply pitching coalbed, Rohn, Wash.....	18095	contractor report CR (series).....	18119-123, 19889-899
Nassau County, N.Y.:		contractors, relocation costs incurred for recruiting salaried personnel, etc., GAO review.....	6537
contract with GSA to purchase Mitchell Field, hearing.....	8113	educational publications, list.....	1258, 9139
southern area, geology and groundwater conditions.....	12234	electronic data processing equipment use, hearings.....	17182
Natches Trace Parkway, general information.....	11120, 12926		

# JANUARY-DECEMBER

	Entry
National Aeronautics—Continued	
employees' housing, provide mort-	
gage insurance—	
law	18774
report	17285
EP series	5535
12844-845, 18124, 19900-901	
Federal catalog system, indoctri-	
nation charts	12841
Goddard Space Flight Center,	
overpayment of rentals for	
automatic data processing ma-	
chines, GAO report	12209
Government publications, price	
list	20087
historical origins	19888
inspection system provisions for	
suppliers of space materials,	
parts, components, and serv-	
ices	1265
manned space flight—	
program, status, 1963	12842
team, qualifications and training	
program	12845
NACA research memorandum RM	
series	1259-60,
3106-8, 5509-34, 7229-31, 10971-	
980, 12843, 14528-536, 16354-	
360, 18116-117.	
NASA and universities on science	
and technology of space explo-	
rations (addresses)	5535
NASA facts	3109-10,
5536-37, 9142, 10981, 14538	
NASA memorandums	1261,
3111, 5538-39, 7232-33, 10982-	
987, 14539-541, 18125-128.	
NASA publications, classification	
change notices	14537
NASA technical publications, July	
1960-Dec. 1961, index	1266
NASA's relation with industry	
(address)	10970
NASA-University Conference on	
Science and Technology of	
Space Exploration, proceed-	
ings	3113-14
press releases	4073
program, industry conference	9143
quality assurance provisions for	
inspection agencies	1263
quality program provisions for	
space system contractors	1264
quality publication NPC 200	
(series)	1263-65
reliability publication NPC 250	
(series)	18129
report, semiannual	
departmental edition	7300
document edition	6091
selling to NASA	11087
SP series	1266-67,
3112-14, 5540-53, 7234-36, 9143,	
10988-989, 16361, 18130-131,	
19902-904, 20976.	
space science program, review,	
papers	19900
spacecraft sterilization conference	
proceedings	1274
technical memorandums	1268,
3115-16, 5554-66, 7237-41,	
10990-11015, 12846, 14544-545,	
16362, 18132-134.	
technical notes	1269-1318,
3117-63, 5567-5610, 7242-93,	
9144-91, 11016-81, 12847-887,	
14546-591, 16363-411, 18135-	
167, 19906-940, 20977-21008.	
technical publications announce-	
ments	4229-30
annual index	5505
corporate source, personal au-	
thor, report and accession	
now	5506
subject guide	5508

	Entry
National Aeronautics—Continued	
technical reports	1321-25,
5612-15, 7301-2, 9198-99, 11088-	
91, 12889, 18168, 19943-946.	
technical reprints NASA RP	
(series)	21013-25
technical translations	1319-20,
3164-68, 7294-99, 9192-97,	
11082-85, 14592, 18169-181,	
19941-942, 21009-12.	
telephone directory, June 1963	16353
topside sounder program	20984
National Aeronautics and Space	
Council, appropriations, 1964,	
hearings	18919
National Agricultural Library:	
appropriations, 1964, Agriculture	
Dept., hearings	9921
bibliographies and lists available,	
list	1326
Korean publications, bibliography	14594
library list (series)	1326,
5617, 11092-93, 12890, 14593-	
594, 16414, 18182.	
subject heading list	16415
National Air Museum, brief guide	1495
National Air Sampling Network, air	
pollution measurements, etc.	3269
National Archives and Records Ser-	
vice:	
accessions	14595
preliminary inventories series	1327-28,
3170, 7305-7, 9200, 12892,	
14596-597, 18183.	
publications, list	7308, 21026
record groups in National Archives	
and Federal record centers,	
list	19048
records, separation, storage, dis-	
posal, GAO review	14006
special lists	7309,
16416	
National Association of Letter	
Carriers, AFL-CIO, agreement	
with Post Office Department	9324
National Association of Post Office	
and General Services Mainte-	
nance Employees, agreement	
with Post Office Department	9324
National Association of Special	
Delivery Messengers, AFL-CIO,	
agreement with Post Office	
Department	9324
National atlas of United States, se-	
parate sheets	3402, 14801
National banking review, journal of	
policy and practice	20393
National banks:	
annual meeting date, amend act,	
report	20597
Federal and State banking laws,	
rulings and interpretations,	
hearings	17165
foreign branches, Federal reserve	
regulation	17438
trust powers, regulation by both	
Comptroller of Currency and	
SEC—	
hearing	13648
report	13553
National Bison Range, birds, list	17458
National Bituminous Coal Commis-	
sion, records, 1935-36, prelim-	
inary inventory	14597
National Bureau of Standards:	
circulars	5618, 7310, 19949
crystal growth and characteriza-	
tion research	9216, 19953
electronic data-processing equip-	
ment, statement of chief, Data	
Processing Systems Division,	
hearing	15329
handbooks	3171-72, 9201-2, 11095,
12893, 16417, 18185-187, 19950	

# INDEX 1963

	Entry
National Bureau of Standards—Con.	
Journal of research	3815-18,
9203-6, 12894-896,	18188
v. 66D, errata	11094
Library, periodicals received	1330
miscellaneous publications	1329
3173, 16418, 18189, 21027	
monographs	1330,
3174, 5619, 7311, 9207-8,	11096-
97, 12897-898, 14598,	16419-
420, 18190, 19951.	
national standard reference data	
program, background informa-	
tion	14604
organic act, amend—	
hearing	18959
reports	18904, 20475
physical constants recommended by	
NAS-NRC, adopted by NBS	21027
publications, supplementary list—	
July 1, 1960-Dec. 31, 1962	5618
July 1, 1960-June 30, 1963	19949
research highlights, 1962	3175
research mission in physical sci-	
ences, general information	12899
technical news bulletin	4228
technical notes	1331-34
3176-77 5620, 7312-13, 9209-17,	
11098-102, 12900-903, 14599-	
604, 16421, 18191-195, 19952-	
953, 21028-30.	
National Cancer Institute:	
Journal	3814
monographs	7315, 9225
National Capital, see Capital of United	
States.	
National Capital Airports Corpora-	
tion, create, hearings	15320
National Capital Housing Authority,	
appropriations, 1964, hear-	
ings	18919
National Capital Parks:	
general information	12927
tour information	19979
National Capital Planning Commis-	
sion:	
appropriations, 1964—	
law	15158
reports	7939, 11951
National Capital Transportation	
Agency:	
appropriations, 1964—	
law	15158
reports	7939, 11951
National cemeteries, American mili-	
tary, World War II	16811
National Center for Health Statistics:	
career in statistics, general infor-	
mation	14657
organization and functions	21092
training program for statisticians	
and related groups	16513
National Clearinghouse for Poison	
Control Centers, bulletins	3937
National Collection of Fine Arts,	
brief guide	1495
National Commission for UNESCO,	
see United States National	
Commission for UNESCO.	
National Conference of Standards	
Laboratories, proceedings,	
1962	18189
National Conference on Air Pollution:	
papers	1414-27
proceedings, Dec. 10-12, 1962	14669
National Conference on Equal Em-	
ployment Opportunity, pro-	
ceedings, Sept. 27-28, 1962	4460
National Conference on Peaceful Uses	
of Space, proceedings	3112

	Entry
National Conference on Public Ad-	
ministration, Washington, D.C.,	
Apr. 3-6, 1963, selected Office	
of Education publications con-	
cerning public administration	
and related fields	8184
National Conference on Smalls Busi-	
ness, report	6050
National Conference on Weights and	
Measures, report, 1962	1329
National Conference to Keep America	
Beautiful, evaluation of efforts	
(address)	13343
National Cooperatives, Inc., pooled	
buying lowers costs for farm-	
ers	6383
National Cultural Center:	
act, amend to enlarge Board of	
Trustees and extend termina-	
tion date—	
hearing	17184
law	17030
reports	13778, 15267
footlight, monthly news letter	3715
press releases	4074
National debt, see Public debt.	
National defense:	
agreement with—	
Belgium	13090
Bolivia	3347
Costa Rica	1536
Dominican Republic	1534
Federal Republic of Germany,	
extension	1549
Guatemala	1542
Honduras	3361
India	3354
Jamaica	14733
Japan	1521, 21121
Korea	11317
Norway	9424
Pakistan	9425, 16610
Paraguay	1543
Peru	9420
Saudi Arabia	20182
Turkey	5741
appropriations, 1943, supplemental,	
repeal portion of act—	
hearing	17184
law	17048
reports	13715, 17105
code of Federal regulations	4918-19,
6431, 8248-52, 13929	
difficult decisions of space age (ad-	
dress)	4395
education act of 1958—	
amend, report	20585
Federal financial assistance for	
science, etc., instruction,	
regulations	19099
guidelines	20634
foreign language fellowships,	
postdoctoral awards, 1964-65,	
graduate fellows, addressees,	
schools, and fields of study,	
list	10074
language development program—	
institutes—	
manual	12070
program, 1963-64	2166
research completed, etc., list	4818-19
language laboratory facilities,	
technical guide	10072
modern foreign language fellow-	
ship program	19104
NDEA and higher education (pe-	
riodical)	3954
new educational media programs,	
news and reports	15452
projects, Sept. 2, 1958-June 30,	
1962	382

# JANUARY-DECEMBER

	Entry
National defense—Continued	
education act of 1958—Continued	
student loan program—	
distribution of Federal funds,	
1959-64 .....	19106
including list of participating	
institutions .....	377, 10075, 17381
summary of programs adminis-	
tered by Education Office, re-	
port, 1961 and 1962 .....	13861
graduate fellowships, programs	
1963-64 .....	2165
investigation, authorization report.	6239
military posture, hearings .....	6187
missile and space weapons, defense	
against, USSR, translation .....	19696
mobilization, report .....	4766
motor transport emergency pre-	
paredness .....	14078
Polaris sales, agreement with Great	
Britain and Northern Ireland .....	13976
policies in 1962, compilation .....	18808
print as House document, report.	17129
preparedness program, investiga-	
tion, report of subcommittee .....	13792
rural fire defense preparation for	
survival .....	4370
safeguarding classified information,	
Industrial security manual .....	4796
spending, impact on labor surplus	
areas, report .....	19069
technical problems, list .....	1339
transportation problems and plans	
(remarks) .....	9779
vulnerability of electric power sys-	
tems to nuclear weapons .....	349
see also Civilian defense—National	
security.	
National development through social	
progress, role of education .....	19107
National Driver Register Service .....	20118
National economy, see Economic con-	
ditions.	
National electric rate book .....	508-515,
6406-8, 13916-922, 15492-500,	
17432-434, 19194-199, 20672-	
675.	
National emergency disputes under	
Labor management relations	
(Taft-Hartley) act .....	5436
National emergency labor disputes,	
selected references, 1948-63 .....	9033
National Exhibition of Prints, held at	
Library of Congress, catalog .....	10027
National Farm Safety Week, July 21-	
27, 1963 .....	7579
National Federation of Federal Em-	
ployees, electronic data proc-	
essing equipment use by Fed-	
eral Government, manpower	
problems, hearing .....	17182
National Federation of Post Office	
Motor Vehicle Employees,	
AFL-CIO, agreement with Post	
Office Department .....	9324
National Fire Prevention Week, Oct.	
6-12, 1963 .....	14896
National Forest Reservation Commis-	
sion, report, 1962 .....	4765
National forests:	
America's playgrounds, skiing .....	39
areas, June 30, 1962 .....	581
backpacking in national forest	
wilderness .....	16753
California—	
campground conditions and re-	
search needs .....	17483
possible impact of recreation de-	
velopment on timber produc-	
tion .....	6501
Clark Fork unit, commercial timber	
management .....	6487
code of Federal regulations .....	4921

	Entry
National forests—Continued	
establishment and modification of	
boundaries, chronological rec-	
ord, 1891-1962 .....	6483
fire report, 1962 .....	17470
Forest Service policy (remarks) .....	20292
hunting and fishing, unauthorized	
diversion of revenues from sale	
of special permits by Forest	
Service, GAO report .....	2335
multiple use in action, 1960 year-	
book, Forest Service inter-	
mountain region .....	580
pest control progress in Nevada,	
Idaho, Utah and Wyoming,	
1961 .....	10230
recreation and other selected land	
use activities, GAO review .....	8320
recreation in Intermountain region.	582
roads and trails, construct and	
maintain, hearings .....	17331
timber sale—	
activities, 1962 .....	10216
story .....	9586
wilderness, America's playgrounds.	16752
work of Uncle Sam's forest rang-	
ers .....	16730
see also Timber—also names of for-	
ests.	
National Gallery of Art, general in-	
formation .....	18196
National Guard:	
air, depot, field and organizational	
maintenance management .....	21031
air reservist (periodical) .....	3440
Army—	
register, 1963 .....	14605
stock control, supply status, list	
of reportable items .....	19958
technicians—	
administrative management	
procedures, pamphlet .....	19955
job description, pamphlet .....	5621
manning criteria .....	9219, 19957
Army-Air Force Wage Board local-	
ities and codes .....	19956
quarterly review of State financial	
plan, reporting procedures .....	19954
National Guard Bureau:	
pamphlets .....	5621,
9219, 16422, 19954-958	
publications, etc., list and index .....	16422
National Harmony Week:	
designate—	
law .....	7826
reports .....	7928, 8054
National health survey:	
data, illness among children .....	20367
findings of occupational health in-	
terest .....	9344
health statistics .....	5686-89, 7402
origin, program and operation .....	18296
vital and health statistics .....	14675-676,
16537-538, 18296, 20112	
National Heart Institute:	
heart research news, film, informa-	
tion booklet .....	19963
intramural research program .....	7316
research grants for studies on	
smoking, 1949-62, review .....	18197
research grants on drugs and heart	
disease .....	19961-962
training program .....	11107
National Herbarium, contributions	
from .....	19975, 21041
National Historical Publications Com-	
mission, proposal for national	
program to meet needs over	
next 10 years, report to the	
President .....	5622
National housing act, see Housing.	
National Institute of Dental Re-	
search, organization, programs,	
etc .....	12905



# INDEX 1963

Entry	Entry
National Institute of Mental Health: mental health project grants pro- gram ..... 19967 training grant program, 1948-61. 1336	National Library of Medicine: bibliography— medical reviews ..... 12912 medical translations, 1959-62. 9232 catalog ..... 12815 medical subject headings used. 3892 MEDLARS story ..... 11242 services, etc. .... 7322, 12914 survey of drug literature ..... 17311
National Institute on Rehabilitation and Workmen's Compensation, report ..... 20224	National Mediation Board: appropriations, 1964— hearings ..... 7981 reports ..... 9874, 15356, 18855, 20425 member, nomination of Howard G. Gamser, hearing ..... 8127 report, 1962 ..... 3182
National Institutes of Health: appropriations, 1964, hearings. 9924 drug policies, interagency coordina- tion, hearings ..... 4781, 10014 health research facilities construc- tion program, GAO review. 2326 laboratory and clinical technicians in research, examination an- nouncement ..... 13330 medical technologists in health re- search, examination announce- ment ..... 15114 mental health manpower studies program ..... 11105 mental health monographs. 14606, 19966 organization handbook, 1962. 1337 organizational directory ..... 9348 programs, work, etc. .... 5624 reference guide series ..... 12907 research, grants and awards, 1962, index ..... 11111	National Meteorological Center, see National Weather Analysis Center.
Research Grants Division, history, organization, functions, 1945- 62 ..... 16423 research utilization series ..... 19968 resources analysis memo ..... 19969 resources for medical research, re- ports ..... 3178, 7317, 19970 scientific papers, bibliography, an- nual ..... 9348 see also Clinical Center, National Institutes of Health.	National monuments and memorials: American military cemeteries and memorials of World War II. 16811 code of Federal regulations ..... 4921 national parks and related areas, public use ..... 4118 publications, price list ..... 9333 see also names of monuments or memorials.
National Inventors Council, facts about ..... 7319	National Museum: brief guide ..... 1495 bulletins ..... 11114, 12915, 14607, 19974, 21040 title page, etc., no. 100, v. 14. 11114 proceedings ..... 8185, 7323-24, 9234-36, 11115, 12916 title page, etc., v. 113. 1342 report, 1962— departmental edition ..... 5632 document edition ..... 4705
National labor relations act, see In- dustrial relations.	National Office Management Associa- tion, electronic data-process- ing equipment use, hearing. 15329
National Labor Relations Board: act, board, and critics (address) 19971 appropriations, 1964— hearings ..... 7981 law ..... 20425 reports ..... 9874, 15356, 18855 decisions— and orders ..... 1341, 5628, 7320, 12911, 16428, 18199 digest ..... 3179 index, v. 105-138 ..... 11112 recent trends (address) ..... 5631 election reports ..... 3935 glossary ..... 18200 elections conducted, information to voters ..... 3180 functions, beneath tumult and shouting (address) ..... 21037 general counsel, nomination of Arn- old Ordman, hearing ..... 12027 member, nomination of Howard Jenkins, Jr., hearing. 17328 National labor relations act, admin- istration problems in construc- tion industry (address) ..... 5630 policy, jurisprudential view (ad- dress) ..... 21038 policy toward current changes and developments in industrial rela- tions (address) ..... 21039 releases ..... 4075 report, 1962 ..... 12910 role in solving labor-management problems (address) ..... 19973 statistical summary, quarterly ..... 3936 Supreme Court docket for 1963-64 (address) ..... 19972 weekly summary of cases ..... 4300	National organizations, see Organiza- tions.
	National Park Service: archeological research series ..... 1344 areas administered by— calendar of events, July-Dec. 18201 1963 ..... 12918 general information ..... 12918 concession contracts, deficiencies, GAO report ..... 12199 historical handbook series ..... 5638, 7333 natural history handbook series ..... 18208 plan for the man, management de- velopment program ..... 7336 press release ..... 4076
	National parks: and related areas, public use ..... 4118 camping facilities ..... 12921 code of Federal regulations ..... 4921 concessions, deficiencies in con- tracts, GAO report ..... 12199 publications, price list ..... 9333 see also names of parks.
	National Plans Conference, report, 1962 ..... 1658
	National policy for educational tele- vision ..... 8178
	National Potato Advisory Board, ap- point, hearing ..... 20605
	National poultry improvement plan, see Chickens—Poultry.
	National product, gross national prod- uct, explanation and how it mirrors our economy ..... 13346
	National Public Works Week, designa- tion, report ..... 17243
	National Railroad Adjustment Board: appropriations, 1964, hearings. 7981 awards ..... 1356-58, 3190, 7340, 9248, 11126, 14612, 16444, 18211, 19980-982. report, 1962 ..... 3182

# JANUARY-DECEMBER

	Entry		Entry
National Reactor Testing Station, SL-1 reactor accident recovery operation, final report.....	5035	National security—Continued	
National Referral Center for Science and Technology, Library of Congress, clearinghouse for information resources of scientific and technical community.....	7183	economic aspects, etc., correspondence course offered by Industrial College of Armed Forces.....	14082, 19372, 20759
National register of scientific and technical personnel:		establish legislative base for personnel security procedures in National Security Agency, reports.....	6179, 9892
American science manpower, 1960..	3191	free world responsibility (address).....	9404
metropolitan distribution of scientists.....	3195	Government operations, investigations, authorization, report.....	6248
salaries and characteristics of scientists.....	3196	in space age (address).....	9620
National Research Council:		internal security act, etc., administration, investigation—	
report, 1960—		authorization, reports.....	4768, 6256
departmental edition.....	9138	staff study, supplement.....	17319
document edition.....	8019	maritime resources for security and trade.....	15123
National Rural Letter Carriers Association, agreement with Post Office Department.....	9324	national security and transportation (remarks).....	7813
National School Lunch Week, school lunch serves Nation, how it operates, etc.....	14823	personnel procedures for ACDA contractor employees—	
National Science Foundation:		hearings.....	10013, 18942
appropriations, 1964, hearings.....	18919	reports.....	11981, 20471, 20483
current research and development in scientific documentation.....	11261	safeguarding classified information, Industrial security manual.....	4796
director, nomination of Leland J. Haworth, hearing.....	12027	State Department security, administration, investigation, report and hearings, print additional copies, reports.....	9985, 11866
fellowship awards, cooperative graduate fellowship program, etc., 1963.....	9249	U.S. personnel security practices, hearings.....	17321
fellowship program, 1963.....	7343	appendix, departmental and agency rules and regulations.....	15398
graduate fellowship program, administrator's guide.....	11127	see also National defense.	
institutes for science and mathematics teachers, 1963-64.....	1359, 11129	National Security Agency, establish legislative base for personnel security procedure, reports....	6179, 9802
institutional grants for science, 1963.....	3192	National Security Seminar:	
international science reports.....	3193, 16445	information guide.....	15663
press releases.....	4077	presentation outlines and reading lists.....	642-643, 17572
programs for dissemination of scientific information.....	7424	National self-determination, see Self-determination.	
programs for education in sciences, report, 1962—	14615	National Service Corps:	
departmental edition.....	5647	establish—	
document edition.....	4714	hearings.....	13818, 15308, 18933
research and development, reviews of data.....	3194, 11131-132, 18212, 19985-986, 21044.	message from the President.....	4728
science course improvement projects series.....	1361	report.....	15355
science education programs, 1964, special projects announcement.....	7341	National Service Corps Advisory Council:	
scientific and engineering research proposals, case study of support.....	19984	establish—	
summer institutes for—		hearings.....	13818, 15308, 18933
elementary school personnel, 1963.....	3197	report.....	15355
secondary school teachers of science and mathematics, 1963.....	3198	National service life insurance, see Life insurance.	
undergraduate instructional scientific equipment program grants 1962-63.....	11133, 14616	National Shipping Authority, current regulations, index.....	10929
National search and rescue manual, amendment 2.....	7800	National Society of Daughters of American Revolution, report, annual, print as Senate document, report.....	11992
National security:		National System of Interstate and Defense Highways:	
administration, hearings.....	8111, 13806, 19052	completion—	
administration of policies and programs—		hearings.....	13821, 15331
basic issues.....	4778	law.....	20438
bibliography.....	4779	reports.....	13615, 13620, 13712, 19018
selected papers.....	2094	National Tillage Machinery Laboratory, general information.....	14834
air traffic control, Federal aviation regulations.....	13899	National turkey improvement plan, see Turkeys.	
		National Union Catalog, Library of Congress.....	8941
		National water quality network, annual compilation of data.....	3293
		National Weather Analysis Center, synoptic meteorological practices, manual.....	11408

# INDEX 1963

	Entry		Entry
National Wheat Referendum Committee, farmers' organization, its purpose, responsibilities, etc. (address)	5811	Natural resources—Continued	
National Wilderness Preservation System:		White House Conference on Conservation, proceedings.....	11412
establish—		Natural science, see Science.	
hearings.....	8118	Naturalists, correspondence between Spencer F. Baird and Louis Agassiz.....	14691
report.....	8060	Naturalization:	
National Zoological Park, brief guide.....	1495	candidates—	
Nationality:		English and Government, home study course.....	14043-45, 15628, 17542, 19343
code of Federal regulations.....	4906	laws for the Nation, citizenship readers.....	8360-62
Communist China—		on way to democracy, citizenship readers.....	620, 8363
Chuang.....	14382	our Constitution and Government—	
economic activities of minority nationalities.....	14350	lessons for citizenship.....	621, 15630
laws, administrative decisions.....	17540	home study course.....	15629, 17543
laws applicable to.....	17544	our Constitution lives and grows—	
North Vietnam, zonal autonomy of various nationalities in Viet Bac zone, implementation, of policy.....	17681	citizenship reader.....	2365
Nations, see Foreign countries.		teacher's edition.....	622
Nation's manpower revolution.....	17327, 19066	rights of the people—	
NATO, see North Atlantic Treaty Organization.		citizenship reader.....	8364
Natrella, Mary G., ordnance engineering design handbook, experimental statistics.....	1377, 5664, 7379, 9315, 18187	teacher's edition.....	8365
Natural Bridges National Monument, general information.....	16438	Investigation—	
Natural disasters.....	16699	authorization, report.....	6255
Natural gas, see Gas.		report on findings.....	8052
Natural history, handbook series.....	18208	publications, price list.....	3266
Natural resources:		see also Citizenship.	
Belgorodskaya oblast, USSR study—	754	Nature:	
Communist China, transformation—	6706	explore the woodlands, Rock Creek Park, walk.....	1351
conservation—		in Belgorodskaya oblast, USSR study.....	754
acquisition of additional public lands for future needs (address).....	6575	living, effect of automatism from standpoint of cybernetics, USSR study.....	7720
by youth employment—		transformation—	
hearings.....	8128, 9931	Communist China.....	6706
reports.....	7960, 8062	philosophical questions concerning theoretical problems, USSR study.....	7098
conservation and development for strengthening rural America (address).....	1676-77	Nature (USSR periodical):	
conservation and utilization, role of National Agricultural Lime-stone Institute (address).....	5812	translations.....	6712
conservation bulletins.....	2368, 8367	Nauchno-tehnicheskiye obshchestva SSSR (periodical):	
North Vietnam, under present government, translations.....	12534	translations.....	2541
present and future needs (address).....	14052	Nauchnyye doklady vysshey shkoly, filosofskiy nauki (periodical):	
protecting values with balanced program (remarks).....	20750	translations.....	8567
under Agriculture Dept. programs (address).....	14848	Nauka i zhizn (periodical):	
energy, water, and river basin development, papers prepared for United Nations conference.....	5094	translations.....	2594
forest, etc., highlights in history.....	2368	Naumann, Eugene C., variable-amplitude fatigue tests, effects of high and low loads.....	3147
Gold Seal Conservation Award, presentation (remarks).....	16760	Nautical almanacs:	
Government's role in development (remarks).....	8370	American ephemeris and nautical almanac, 1965.....	18213, 11135
land and water conservation bill, Secretary Udall stresses importance, before Outdoor Writers Convention (remarks).....	17548	1964.....	
minerals and mining, mapping and geodetic control, papers prepared for United Nations conference.....	5095	Nautical training schools, Coast Guard rules and regulations.....	11679
research and development, report.....	20122	Navaho Indians, see Navajo Indians.	
resource bulletins.....	15586-588, 17502-504, 19271-273	Navaho missiles, see Missiles.	
selected references.....	10241	Navajo Dam and Reservoir:	
USSR, protection in light of resolutions of 224 CPSU Congress.....	16049	land exchange—	
water, investigations, Wisconsin.....	10294	law.....	17042
		reports.....	13594, 17261
		Navajo Indians:	
		manpower training.....	12067
		oil and gas leases, approve agreement, reports.....	17270, 20485
		population, 1960.....	5694
		rights and interests in and to lands in New Mexico, determine, report.....	19039
		Shonto Community, role of trader—	
		departmental edition.....	16812
		document edition.....	17059
		yearbook 1951-61, decade of progress.....	5046

# JANUARY-DECEMBER

	Entry
Navajo language, description, Navajo yearbook, 1951-61.....	5046
Navajo National Monument, Ariz., general information.....	16439
Naval Academy, Annapolis:	
admission, etc., regulations.....	16458
appointment law, revise, reports.....	13611, 13621
catalog, 1963-64.....	12936
register, 1962-63.....	3200
Naval art and science:	
naval research logistics quarterly.....	3945
strategy and tactics, bibliography.....	9262
theory of games, methods and problems as applied to naval studies, USSR study.....	12464
warfare problems, role of science in solving, USSR study.....	17900
Naval aviation, <i>see</i> Aeronautics.....	
Naval aviation news.....	3944
Naval Civil Engineering Laboratory, technical report.....	13135
Naval courts, <i>see</i> Courts martial and courts of inquiry.....	
Naval education:	
combined case instructions 1-50.....	14627
Marine Corps, occupational specialties and schools, guide.....	19814
Naval Reserve team training guide.....	7359
naval training bulletin.....	3949
Navy training courses.....	1366, 1368, 5654-56, 7357-58, 14624-625, 14628-630, 18219, 18222-223, 19991-992.
nuclear propulsion training program, information.....	3214
officer correspondence course, clinical laboratory procedures, pt. 2.....	9267
officer, language and service schools code manual.....	14626
training manuals and correspondence courses, lists.....	7360, 19995
training publications for advancement in rating, bibliography.....	11149
Naval Electronics Laboratory, report.....	11262
Naval establishment, <i>see</i> Navy.....	
Naval gunfire support.....	3045
Naval history:	
bibliography.....	9262
Civil War naval chronology, pt. 3, 1862.....	7356
Naval installations, <i>see</i> Installations (military).....	
Naval Intelligence Office, ONI study.....	16454
Naval Medical Research Laboratory, reports.....	7185-7200, 9099-9106
Naval nuclear propulsion training program.....	3214
Naval Oceanographic Office:	
chart correction list.....	11141
publications.....	1364, 3201-9, 5648-52, 7345-53, 9254-59, 11136-40, 12937-939, 14619-622, 16450-452, 18214-217, 19988-990, 21045-54.
Naval officers, <i>see</i> Navy.....	
Naval Ordnance Laboratory, White Oak, Md.:	
news for release, NOL (series).....	4078
technical reports.....	1373, 12948
Naval Ordnance Plant, York, Pa., Navy disposal report, hearing.....	6185
Naval Personnel Bureau:	
information bulletin.....	3450
personnel administration, functions, etc.....	14631
Protestant lay leader resource guide.....	16456
training manuals and correspondence courses, lists.....	7360, 19995
Naval petroleum reserves, No. 4 and adjoining areas, Alaska, seismic and gravity surveys.....	5020

	Entry
Naval Radio Station, Cheltenham, high-frequency spiral antenna.....	11184
Naval Research Laboratory:	
annual report, 1962.....	11152
bibliography series.....	12948
NRL services in development of tri-service missile range radar instrumentation.....	12954
progress, report, monthly.....	4139
report series.....	1372, 3220-34, 7368-71, 9273, 11153-192, 12949-957, 14633, 16460-463, 18228-254, 20001, 21057.
semiautomatic atmospheric electricity station.....	3229
Naval research logistics quarterly.....	3945
Naval Research Office:	
ACR series.....	7365, 11151, 12945, 18224
Information Systems Branch, information systems summaries.....	18224
Naval research reviews.....	3946
Naval Reserve:	
enlist medical program.....	9098
service erroneously credited in computation of basic pay, relief of naval officers, report.....	9865
team training guide.....	7359
Naval Reserve Officers Training Corps:	
aviation and amphibious cruise manual, 1963.....	11147
regulations, change.....	18220
Naval reservist (periodical).....	3947
Naval schools, <i>see</i> Naval education.....	
Naval service, <i>see</i> Navy.....	
Naval ships, <i>see</i> Ships.....	
Naval space surveillance system for detection and identification of satellites, error analysis.....	18229
Naval stores:	
demand and price situation.....	20289
report—	
annual.....	5740, 11339
monthly.....	3948
Naval Supply Center, Norfolk, excess costs of milk purchased for Guantanamo Naval Station, GAO review.....	12201
Naval training, <i>see</i> Naval education.....	
Naval Training Device Center, Port Washington:	
publications, index.....	3216, 21056
technical reports.....	1371, 3217-19, 5657-58, 7366, 9272, 12946-947, 18226-227, 19998-20000.
training device guide.....	3235, 9274-75, 14634, 16464
Naval vessels, <i>see</i> Destroyers (warships)—Ships—Warships.....	
Naval Weapons Bureau:	
data on reliability engineering and testing.....	9280
directory.....	3484
employment opportunities.....	3616
NAVWEPS report.....	5659
ordnance pamphlet OP series.....	1374, 5660, 7372, 11194-195, 12959-960, 14635.
Standards Laboratory—	
instrument calibration—	
procedures.....	9281-85, 16466-469
technique.....	9280-87
measurement system operation procedure.....	9288
Navigable waters, <i>see</i> Bridges.....	
Navigation:	
aids, Coast Guard lists:	
Atlantic and Gulf Coast.....	4641
Atlantic Coast, local.....	4640
Great Lakes.....	6041
Mississippi River system.....	6042
Pacific Coast and Pacific Islands.....	4642

# INDEX 1963

Entry	Entry
Navigation—Continued	Navy—Continued
aids to navigation regulations, amendment.....	officers—Continued
American practical navigator.....	engineering duty, qualifications, assignments, etc.....
Arkansas River, conditions at typical lock and dam, hydraulic model investigation.....	erroneous compensation based upon incorrect computation of service for basic pay, relief, report.....
conditions, Conneaut Harbor, Ohio, hydraulic model investigation, detached breakwater and entrance, Lorain Harbor, Lorain, Ohio, hydraulic model investigation.....	line, performing supply duties, guide.....
laws	professional reading guide.....
equipment, Coast Guard approved lists.....	officers—
foreign dredge act not applicable to Virgin Islands, opinion of Attorney General.....	register—
navigable waters, code of Federal regulations.....	departmental edition.....
notice to mariners.....	document edition.....
Great Lakes, etc.....	relief.....
Index 17-52, 1963.....	personnel, household goods shipments, unnecessary costs to Government for packing, GAO review.....
radio aids, 1962, changes.....	physical fitness program, shape up exercises.....
rules, provide exceptions—	preferred circuits, handbook supp.....
law.....	prime contractors, selling to.....
reports.....	procurement directives—
space, sighting problems associated with sextant type measurements.....	appendix.....
treaty with Luxembourg.....	revisions.....
see also Air navigation.	publications, price list.....
Navigator (periodical).....	recipe service.....
NAVTRADEVEN, see Naval Training Device Center, Port Washington.	regulations, changes.....
NAVWEPs report.....	shipbuilding and conversion program, 1964.....
Navy:	ship's serviceman 3 & 2, training course.....
administration of Trust Territory of Pacific Islands, trusteeship period, 1947-51.....	sites, engineering weather data, manual.....
AEC-naval reactor program report, hearing.....	training manuals and correspondence courses, list.....
building maintenance painting, standards, handbook.....	training publications for advancement in rating, bibliography.....
civil engineer (periodical).....	U.S., I-T boats operations during World War II, at close quarters.....
Dare County practice weapons range, acquisition, hearings.....	USSR, military translations.....
destroyers, history, 1902-62.....	weapons officers, home study course.....
diving manual.....	see also Messes—Retired officers, etc.—Uniforms.
enlisted personnel, classification manual.....	Navy Cross:
enlist medical program.....	award to members of Armed Forces for gallantry in cold war incidents—
failure to purchase leased automatic data processing components offered at reduced prices, GAO report.....	hearing.....
fleet reserve, ship activation manual.....	law.....
flight information publication, planning, quarterly check list.....	reports.....
history, biography, strategy and tactics, bibliography.....	Navy Department:
landing party manual, 1960, change.....	additional costs from procurement of test equipment as special tooling under contracts awarded Lockheed Aircraft Corporation Missile and Space Division, GAO report.....
leadership, manual.....	airborne early warning search radars, unnecessary costs incurred in procurement, GAO examination.....
management review.....	aircraft production, failure to use excess spare parts, etc., GAO review.....
marine climatic atlas of world, Arctic Ocean.....	appropriations, 1964, military construction, hearings.....
medical statistics, 1961.....	communication station, agreement with Australia.....
medicine, statistics, quarterly highlights.....	contract with Aeroflex Corporation for spare parts, GAO review.....
messes ashore, manual, change.....	contract with Brown-Raymond-Walsh for Spanish base construction program, failure to recover excessive administrative costs included in negotiated fixed prices—
military personnel serving as military inspection representatives in Tokyo and Osaka, Japan, Navy Dept, illegal per diem payment, GAO report.....	Defense Dept. reply, GAO report.....
Navy's quick slide system.....	GAO review.....
nuclear propulsion training program, information.....	
officers—	
education, language and service schools code manual.....	



# JANUARY-DECEMBER

Entry	Entry
Navy Department—Continued	Neaves, A., research on spontaneous magnetism in solid bodies..... 9596
contracts, Lockheed Aircraft Corporation subcontract with The Brush Beryllium Co. for Polaris missile parts, prices, GAO examination..... 10259	Nebraska:
contracts, retention by General Dynamics/Pomona Division of General Dynamics Corp., Pomona, Calif., of refunds related to illegally imposed taxes included in prices, GAO review..... 8321	annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics.... 4567
forms management guide..... 20010	climatological data..... 3517
land withdrawal at Chocolate Mountain Aerial Gunnery Range—	county business patterns, activities covered by OASDI program.... 13284
law..... 17049	electric rate book..... 19198
reports..... 11805, 17264	Kansas River flood control, engineer report—
overcharges by Westinghouse Electric Corporation for propulsion machinery for U.S.S. Enterprise, GAO report..... 19283	departmental edition..... 423
overprocurement of magnetos and distributors for reciprocating aircraft engines, GAO review..... 13998	document edition..... 317
payments under contracts with Hazeltine Corporation, GAO review..... 2330	mineral industry, minerals year-book chapter..... 1216
petroleum storage in commercial facilities, San Francisco area, unnecessary annual expenditures, GAO report..... 15599	population, 1960, characteristics... 18656
position classifiers manual..... 12241	precipitation data, hourly..... 3771
presentations..... 3240-43	windbreaks, growth curves for ponderosa pine..... 4989
purchase of aircraft engine bearings, uneconomical procurement, GAO review..... 5009	women workers, 1960..... 5776
report, 1962..... 10038	ZIP code directory..... 20051
review of management..... 16471	Nebulae, see Crab Nebula.
spare parts and modification kits, overpricing, GAO review..... 8317	Neectarines, production, use, value, by States, 1961-62..... 16615
specifications, standards and qualified products lists, guide..... 21063	Need for comprehensive educational planning..... 378
supply management of submarine equipment and spare parts, GAO review..... 594	Needleman, Stanley M., arctic earth science investigations..... 1749
Tartar missiles, overprocurement of spare guidance components for shipboard repair, GAO review..... 15597	Neel, Carr B., wing leading edge internal modifications influence on transient temperature rise..... 16354
unnecessary costs in procurement of—	Neel, George I., estimation of probabilities associated with F statistic by digital computer techniques..... 16783
aeronautical replacement spare parts, GAO report..... 19287	Neff, Earl L., plotting positions for logarithmic-normal frequency studies..... 18397
radar altimeters, GAO review.... 17512	Neff, Kenneth L.:
RPM comparators..... 14008	education in southeast Asia, selected bibliography..... 8183
unnecessary expenditures for leasing commercial facilities to store Govt-owned empty steel drums, Los Angeles, Calif., area, GAO report..... 20720	national development through social progress, role of education.... 19107
X-22 (VTOL) contract award, hearings..... 15374	Nefsy Divide quadrangle, Wyo., geology..... 8330
Navy installations, see Installations (military).	Negative concentration effect in thermal diffusion of gases in porous media, USSR..... 8539
Navy training courses, see Naval education.	Negotiated contracts, see names of departments, etc., issuing contracts.
Navy Underwater Sound Laboratory, Fort Trumbull, New London, Conn., USL report..... 11263	Negroes:
NAWAC, see National Weather Analysis Center.	airmen, Rapid City, S. Dak., discrimination report before Civil Rights Commission..... 6022
Naylor, Peter H., see Naylor, Peter H.	America is for everybody, commemoration of 100th anniversary of signing of Emancipation Proclamation..... 4831
NBS, see National Bureau of Standards.	business opportunities, progress (address)..... 18748
NCHS, see National Center for Health Statistics.	economic conditions, changes, 1960-1960..... 19795
NDC, see Nuclear design calculations.	economic status of workers, 1955-62..... 19801
NDEA and higher education (periodical).	equal job opportunities (address)... 16265
Neal, Luther, Jr., aerodynamic characteristics of 9° cone configuration, etc., at angles of attack up to 180°..... 7265	first-class citizenship, progress toward (address)..... 9021
Near East, see East (Near East).	freedom to the free, 1863 century of emancipation 1963..... 4609
	housing, open occupancy trends in low-rent public programs..... 21096
	labor Department sponsored conference with college presidents and executives, on preparation and motivation of youth for employment..... 5430, 14443, 18017
	problems and opportunities in business..... 6050
	social and economic statistics, census of population, 1960..... 18702

# INDEX 1963

	Entry
Negroes—Continued	
social problems of American community (remarks).....	21151
Tennessee, business enterprises.....	1464
youth, provide educational training to develop skills to highest potential (address).....	19775
Neighborhoods, urban renewal rehabilitation, minimum property standards.....	13913
Neill, R. R., multipurpose powder fire extinguishing agents.....	11161
Nekotorye problemy deystviya ioniziruyushchey radiatsii na nervnyuyu sistemu, USSR, translations.....	12374
NEL, see Navy Electronics Laboratory.	
Nells, Marvin D., relief.....	15222
Nelson, Howard D., protecting raisins against insects during drying and storage with malathion-treated trays.....	7575
Nelson, James H., magnetism of earth.....	1953
Nelson, Morlan W.: water supply outlook and Federal-State-private cooperative snow surveys for— Columbia basin.....	4286 9391
Nelson, Richard W., storage life of individually frozen Pacific oyster meats, etc.....	17448
Nelson, Robert E.: commercial uses and volume of Hawaiian tree fern.....	6503
forest products harvested in Hawaii, 1958 and 1960.....	10224
Nelson, Robert O., relief. 7910, 11946, 13396	
Nelson, Thomas C., basal area growth of natural loblolly pine standards.....	19264
Nelson, Willis H., geology of Duck Creek Pass quadrangle, Mont. Nelson County, Va.: sapphirite ores.....	1234 1234
titanium resources.....	1234
Nematodes, see Nematoid worms.	
Nematoid worms: burrowing nematode, pest of citrus.....	18442
controlling in home garden.....	7561
plant nematodes.....	1622
Nenitescu, Costin D., biographic information.....	2492
Nenni, Pietro, Pravada attacks for anti-Communist policy.....	876
Neofitou, Michael J., relief.....	17094
Neoplasms, see Tumors.	
Neosho River, see Grand (Neosho) River.	
Neothunnus, see Tuna fish.	
Neotropical region, caddis flies, Rhyacophilidae and Glossosomatidae (Trichoptera) studies.....	9235
Nepal: around world with Bob Poage, report on recent trip.....	2046
economy, basic data.....	15647
investment guarantees, agreement.....	16611
transportation facilities development termination, agreement.....	13077
Nepheline syenite, minerals yearbook chapter.....	18070
Neruda, Pablo, speech, Oct. 12, 1962.....	6637A
Nerves: bone tissue, morphological changes in animals, in radiation sickness, USSR study.....	17662
brain neuron excitation, electrophysiological, histochemical, and cytomorphological indices, USSR study.....	6800

	Entry
Nerves—Continued	
central nervous system neurons, structural and histochemical changes from hypothermia, USSR study.....	1001
peripheral, changes due to effect of vibration, USSR experimental study.....	17995
Nervous system: central— effect of ionizing radiations, USSR study.....	15951
morphological changes in burns, USSR study.....	17983
pharmacodynamics of psychic functions, Czechoslovak study.....	12424
structural and histochemical changes from hypothermia, USSR study.....	1001
certain problems of effect of ionizing radiation on nervous system, USSR.....	12374
changes in cancer, Soviet book review.....	2460
cybernetics— inside man.....	828
Soviet studies.....	16263
effect of mechanical vibration.....	1777
higher activity— functions in animals antenatally irradiated with ionizing radiation, USSR study.....	17673
pathophysiology, conference on research methods, USSR.....	16177
USSR journal, translations.....	1083, 6675, 8674
higher, progeny, effects of ionizing radiation on functions.....	14957
neurohumoral mechanisms of radiation-induced permeability disorders of histohemetic barrier, USSR study.....	20784
Neurological and Sensory Disease Service program, mental retardation activities.....	20108
neurological and sensory disorders— film guide.....	16514
research advances.....	1338
occupational neuro-muscular diseases, bioelectrical activity in muscles, USSR study.....	17976
peripheral nerve trunks, changes due to effect of vibration, USSR experimental study.....	17995
peripheral vessels of rabbit ear, effects of adrenaline and noradrenaline.....	18470
psychopharmacology, central nervous system effects, animal research, handbook.....	21093
shivering control, review of literature.....	18468
see also Reflexes.	
Nessel, Mark A., short-term treatment of learning difficulty in a child.....	16788
Nestingham, Ivan A., tomorrow is already here.....	3298
Netherlands: economic developments, 1962.....	10331
fisheries, 1961.....	10196
import tariff system.....	6604
maritime matters— operational arrangements for visit of N.S. Savannah, agreement.....	16582
public liability for damage caused by N.S. Savannah, agreement.....	16581
mission to, report of President's Panel on Mental Retardation.....	20082
ornamental plant explorations.....	11432
outdoor recreation survey.....	1380
trade mission 1963, final report.....	14009

	Entry
Netherlands Antilles, living conditions	6610
Nettles, J. Cary, ballistic-missile base heating with operating rocket.	5530
Networks, <i>see</i> Electric networks.	
Netzeband, F. F., mineral industry of Texas	3067
Neuman, Frank, micrometeoroid velocity detector	19933
Neuman, Rozsi relief	15188, 20560
Neumann, Harvey E., convective heat transfer in nuclear rocket nozzle	18141
Neumeyer, Fredrik, law of employed inventors in Europe, study	6303
Neural control of ciliary muscle	15022
Neurocybernetics, USSR study	2483
Neurohumoral mechanisms of radiation-induced permeability disorders of histohematic barrier, USSR	20784
Neurological diseases, <i>see</i> Nervous system.	
Neurons, <i>see</i> Nerves.	
Neuropsychiatry:	
identifying overly anxious patient in impacted 3d molar surgery.	72
Rumania, medical care of neuropsychiatric patients, problems	14175
Neuroses:	
personality and neuroses, USSR study	12486
veterans, service-connected psychoneuroses, employment adjustment	11372
Neurosurgery, <i>see</i> Surgery.	
Neutrality, Laos, declaration and protocol, etc.	20178
Neutralizer tests on flight-model electron-bombardment ion thruster	16368
Neutrinos, astronomy, Hungarian study	8964
Neutron spectrometers, <i>see</i> Spectrometers.	
Neutrons:	
activation analysis, fundamentals and applications	20334
activation techniques for measuring resonance integrals	14963
flux—	
fast liquid metal loop in advanced test reactor, design criteria	16848
preliminary dose measurements on neutron generator	9633
spatial distribution on surface of graphite-lined cavity	5940
gamma ray spectrometer, description	7587
harmful effect of fast neutrons on mouse testes, comparison with X-ray	20813
high-energy, changes induced in carbon and graphite	4477
in space, sources in solar system	5608
interaction between cylindrical storage containers, computer program analysis	11557
irradiation, animals, action of elevated temperatures, USSR study	16013
irradiation, effect on brittle-rupture properties of construction materials of reactor vessels	9690
moisture meter calibration curves, determining slope	8302
multiple scattering of polarized and unpolarized neutrons by s-type resonances	12953

	Entry
Neutrons—Continued	
plutonium-beryllium sources, guide for preparation of license applications for—	
uses other than well logging	15020
well logging	15021
pulsed, applicable to power reactor start-up procedure, development	1831, 9679, 14980
solar flux incident at top of atmospheres of earth and neighboring planets for spectral region 50 Å to 3000 Å	19891
thermal, diffusion length measurements in light water from 20° to 90° C.	9674
thermalization—	
differential	7690
integral—	
quarterly progress report	14968
summary report	11553
thorium-232 resonance captures in Peach Bottom HTGR critical assembly, activation measurements	7689
transmutation doping method for fabrication of semiconductor devices	7704
Nevada:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4571
beryllium investigations, 1959-62	9114
census of population, 1960, characteristics	11610
climatological data	3517
conveyance of public lands to Henderson, Nev., at fair market value, report	13760
county business patterns, activities covered by OASDI program	15054, 18677, 20673
electric rate book	
Fernley-Wadsworth area, groundwater conditions	8351
lumber and other forest products, production, 1960	570
mineral industry, minerals year-book chapter	1217
national forests, pest control progress 1961	10230
100th anniversary of admission as State, commemorative medals—	
law	20430
reports	13727, 18851
precipitation data, hourly	3771
public lands—	
convey to Lincoln County, report	9878
grants, repeal act, report	6170
transfer to Colorado River Commission, amend act—	
law	9811
reports	6169, 8071, 9811
public school finance program, 1962-63	6340
secondary nonferrous metals industry, data	5471
snow survey measurements, 1910-61	1502
water supply—	
fall summary, 1963	21115
outlook and snow surveys	4288
ZIP code directory	20052
Nevada Centennial Commission:	
Treasury Dept. to supply and sell commemorative medals—	
law	20430
reports	13727, 18851
Nevada Test Site:	
community, establish, hearings	20446
stratigraphy and structure of Rainer and USGS tunnel areas	19315

# INDEX 1963

	Entry
Nevins, Allan, origins of land-grant colleges and State universities...	18740
New, John C., satellite reliability through environmental tests...	16388
New Bedford, Mass.: area redevelopment manpower report...	17400
Clark Point, beach erosion control study, engineer report—	
departmental edition.....	2187
document edition.....	2007
wholesale food-distribution facilities.....	14868
New Brunswick Laboratory:	
general information.....	7719
research progress reports.....	5938, 18581
New Buffalo, Mich.:	
harbor, engineer report—	
departmental edition.....	440
document edition.....	237
New dimensions in higher education.....	6336, 8179, 17383
New direction in health, education, and welfare, background papers on current and emerging issues.....	15622
New England:	
census of housing, 1960, metropolitan housing, tenure, rooms, condition and plumbing, etc.—	1910
climatological data.....	3517
coast, trawling, 1961, progress report on studies.....	8270
county business patterns, activities covered by OASDI program.....	11614, 18609
fishery vessels, safety manual for fishermen, captains, and owners.....	4942
hydrologic factors, relation of animal peak discharges, study—	
marine polychaete worms of region.....	21040
precipitation data, hourly.....	3771
New era (periodical).....	3956
New frontiers in Yand-shu-p'u, eastern Shanghai, from slums to modernity.....	1136
New Guinea:	
reconstruction, 1949-61.....	8514
sailing directions, change.....	9256
New Hampshire:	
air transportation.....	1453
conference in matter of pollution of Interstate waters of Androscoggin River proceedings.....	3276
county business patterns, activities covered by OASDI program, errata.....	18669
electric rate book.....	20674
5B redevelopment area, statistical profiles.....	11698, 13376
forestry and forest products.....	1449
mineral industry, minerals year-book chapter.....	19850
population, 1960, characteristics.....	18657
small business development.....	1405
small manufacturing firms.....	1446
vacation-travel businesses, survey, inventory, and overall view.....	1485
ZIP code directory.....	20053
New Haven, Conn.:	
occupational wage survey—	
departmental edition.....	9059
document edition.....	7842
New Hope Dam, construction, hearings.....	10024, 13607
New Jersey:	
annual survey of manufactures, 1961, States, standard metropolitan statistical areas, and large industrial counties, statistics.....	4565
climatological data.....	3517

	Entry
New Jersey—Continued	
coastal plain, advance production under mature oak stands.....	10235
commercial egg-producing farms, costs and returns, 1962.....	10050
community economic redevelopment programs, case studies.....	16817
compact to establish Delaware River Joint Toll Bridge Commission, consent of Congress, hearing.....	17174
county business patterns, activities covered by OASDI program.....	13281, 18676
electric rate book.....	510
landings, fish and shellfish—	
annual summary, 1962.....	12131
monthly.....	3957
nonmedical health officer, licensing, State and local experiences.....	3294
northeastern, census of housing, 1960, standard consolidated area, components of inventory change.....	1907
northern, consumer expenditures and income, 1960.....	7157, 12784
outdoor recreation needs of metropolitan, New York-New Jersey-Philadelphia region.....	7882
population, 1960, characteristics.....	18658
precipitation data, hourly.....	3771
weather stations, decadal census.....	16676
ZIP code directory.....	20054
New line (Japanese periodical): translation.....	2800
New London, Conn.:	
hurricane survey, engineer report—	
departmental edition.....	441
document edition.....	235
see also, Coast Guard Academy, New London.	
New look at farm debt picture.....	2273
New Mexico:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics.....	4571
climatological data.....	3517
Costilla Creek compact, amendment, report.....	18864
county business patterns, activities covered by OASDI program.....	15054, 18677
iron resources reconnaissance.....	20948
mineral industry, minerals year-book chapter.....	20960
Pecos River depletion, causes.....	5037
ponderosa pines—	
estimating past diameters.....	17493
pole-size, taper table.....	17494
population, 1960, characteristics.....	11611
precipitation data, hourly.....	3771
public school finance program, 1962-63.....	17389
rare-earth metal and thorium resources, technological and economic problems.....	3055
relief, report.....	15261
rights and interests of Navajo Tribe and Ute Mountain Tribe, report.....	19039
saline-water resources.....	5035
weather stations, decadal census.....	16677
women, legal status.....	9512
ZIP code directory.....	20055
New opportunities in search for peace (address).....	18536, 20145
New Orleans, La.:	
air pollution and asthma, report, preliminary.....	1400
Cotton Exchange, futures trading and open contracts in cotton.....	3747

# JANUARY-DECEMBER

	Entry		Entry
New Orleans, La.—Continued		New York State—Continued	
hurricane survey, engineer report—		weather stations, decadal census—	16678
departmental edition—	436	women workers, 1960—	14809
document edition—	262	ZIP code directory—	20056
income, education, and unemployment in neighborhoods—	9071	New York University, scientific and engineering research proposals, case study of support—	19984
occupational wage survey—		New Zealand:	
departmental edition—	10906	aerospace disturbances research program, agreement—	14730
document edition—	9827	agricultural production, marketing, and trade policies, and their bearing on U.S. farm exports—	17359
New products and processes, guide to recent technical reports available from Federal agencies—	14933	aviation transport services, agreement—	16596
New Rochelle, N.Y., civil rights, public schools, 1962—	181	gas appliances, household and commercial, U.S. market—	18620
New York Central RR., accidents—	2450, 6636, 8436, 12267	health information for travel—	16498
New York City:		sailing directions—	5650
census of housing, 1960, standard consolidated area, components of inventory change—	1907	sending gift packages to—	2411
consumer expenditures and income, 1960—	1164, 7149	trade, supplementary concessions to GATT, agreement—	18337
Cotton Exchange, futures trading and open contracts in cotton, wool and wool tops—	3748	Newark, Del., water spreading experiments—	612
demonstration center, rehabilitation in drug addiction—	19966	Newark, N.J.:	
electric facilities of area, map—	516, 2266	income, education, and unemployment in neighborhoods—	7177
employees' retirement patterns—	21113	occupational wage survey—	
Federal reserve member banks, condition, weekly statement—	3535	departmental edition—	12793
illegal narcotics traffic and its effect on juvenile and young adult criminality, hearings—	12024	document edition—	11737
income, education, and unemployment in neighborhoods—		relocation of elderly people, hearings—	6287
Brooklyn—	9072	redevelopment area, statistical profile—	15136
Manhattan—	10915	Newborn, see Infants.	
Staten Island—	7176	Newcastle, Wyo., geology of area—	20729
Mercantile Exchange, futures trading and open contracts in potatoes—	3750	Newcome, Roy, Jr., water resources of Red River Parish, La.—	5036
occupational wage survey—		Newell, F. D., criteria for acceptable representation of airplane dynamic responses in simulators used for pilot training—	7367
departmental edition—	18034	Newell, Homer E., world in space—	9141
document edition—	17061	Newfoundland, sailing directions, change—	21046
outdoor recreation needs of megalopolis, New York-New Jersey-Philadelphia region—	7382	Newport, T. G., ground-water exploration in Al Marj area, Cyrenaica, United Kingdom of Libya—	14037
Produce Exchange, futures trading and open contracts in cottonseed oil, soybean oil—	3748	Newport Bay:	
wholesale butter, margarine, egg and cheese market facilities—	1701	beach erosion control study, engineer report—	
New York Harbor, Ellis Island, disposal, hearings—	6299	departmental edition—	4869
New York State:		document edition—	4693
annual survey of manufactures, 1961, States, standard metropolitan statistical areas, and large industrial counties statistics—	4563	Newport News, Va.:	
climatological data—	3517	occupational wage survey—	
community economic redevelopment programs, case studies—	16817	departmental edition—	16286
county business patterns, activities covered by OASDI program—	13281, 18670, 15497	document edition—	15177
electric rate book—		News bulletin, USDA employee—	4273
Federal Government role in metropolitan region, hearings—	19053	News digest:	
5B redevelopment area, statistical profile—	13355	Federal Power Commission—	3964
industrial modernization conference, report—	18630	Securities and Exchange Commission—	3965
landings, fish and shellfish—		News for farmer cooperatives—	3966
annual summary, 1962—	12130	reprints—	469, 2239-40, 6383, 8208, 10101
monthly—	3963	News letters:	
mineral industry, minerals yearbook chapter—	1218	Civil War Centennial Commission—	3988
precipitation data, hourly—	3771	information from President's Committee on Equal Employment Opportunity—	3789
population, 1960, characteristics—	18659	medical newsletter—	
public school finance program, 1962-63—	12077	Aviation Medical Service—	3891
		Medicine and Surgery Bureau—	3890
		Project English—	381, 12072, 20640
		rural areas development—	4160
		State Department—	3595
		technical reports—	4231
		to extension program leaders, rural defense—	8227
		United States National Commission for UNESCO—	4252
		News releases, see names of departments, etc., issuing releases.	



# INDEX 1963

	Entry
News summary, Federal Trade Commission	3680
Newsletters, <i>see</i> News letters.	
Newsnotes on education around world	3968
Newsom, William A. Jr., aerodynamic characteristics of 4-duct tandem VTOL-aircraft configurations	3136
Newspapers:	
microfilm, list	20939
Soviet Union, in Library of Congress	5465
<i>see also</i> Press.	
Newsprint, <i>see</i> Paper.	
Newton Water Users' Association, contract, approve, report	19029
NG, <i>see</i> National Guard.	
Nhan-dan (periodical): translations	12466, 14149
Nicaragua:	
import tariff system	10330
investment in	2395
shrimp fisheries, survey	2292
Nicholas County, W. Va., coal, preparation characteristics	3093
Nichols, Grady B., solar cell power supply for interplanetary spacecraft	18145
Nichols, Landon R., sodium flash-vaporization facility	11041
Nickel:	
alloys—	
copper-nickel, mechanical properties at elevated temperatures	6810
hydrogen effect on stress-rupture and fatigue properties, preliminary investigation	1287
strengthened by dispersed thorium	14585
tantalum-modified, advanced-temperature investigation	9150
contracts, stockpile investigation, hearings	4772
corrosion in air and oxygen	10964
creep-rupture—	
controlled environments	11187
strength and oxide bonding	11163
determination in tungsten by combined ion exchange X-ray spectrographic method	20905
Hanna contracts, stockpile investigation, hearings	326
hysteresis loop of cobalt-nickel ferrites	20314
influence of microstructural inclusions on friction and wear	11046
metallic binders	16334
mineral industry survey, monthly	3969
minerals yearbook chapter	18085
Philippine nickeliferous ores, metallurgical investigations	3072
separation and recovery by solvent extraction and electrorefining	5486, 9118
Nickel-cadmium cells, <i>see</i> Electric batteries—Storage batteries.	
Nickerson, John T. R., sub-sterilization doses of radiation, effects on storage life extension of soft-shelled clams and haddock fillets, final summary	4486
NIDR, <i>see</i> National Institute of Dental Research.	
Niederfrank, E. J., facts, etc., about rural population	2259
Niederkorn, Donald N., study guide for general science	6310, 13832
Niger:	
import tariff system	2393
investment guarantees, agreement	1555
investment law	15648
Libya boundary, study	20147
Peace Corps, agreement	16590

	Entry
Nigeria:	
fact sheet	20142
fisheries survey	15525
investment guarantees, agreement	5742
living conditions	8381
Nightingale, F. S., fresh fruit and vegetable unloads in western cities	5785
Nightwear, knit, current industrial reports	3575
NIH, <i>see</i> National Institutes of Health.	
Nike Apache rocket, <i>see</i> Rockets.	
Nike systems, <i>see</i> Missiles.	
Nikola Tesla Electro-Technical Institute, work, 1961	906
Nilsson, Rozsi, <i>see</i> Neuman, Rozsi.	
Nimbus spacecraft, <i>see</i> Satellites.	
NIMH, <i>see</i> National Institute of Mental Health.	
Niobium:	
alloys—	
columbium alloys recommended for rolling to foil	7627
columbium determination in titanium alloys, recommended methods of panel of Metallurgical Advisory Committee on Titanium on methods of analysis	12964
columbium-hafnium binary, for elevated temperature service, evaluation of Zr 1.5 w/o Nb cladding for use in boiling water reactor	1240
Hall coefficient of superconducting and normal Nb-25% Zr	9677
niobium and molybdenum-niobium alloys, metallurgy, literature search	18234
welding	18590
materials survey	5850
minerals yearbook chapter	3054
powder, sintering, USSR study	18069
Niobium oxides, carbothermic reduction of niobium pentoxide, problems, USSR study	2652
Niobium pentoxide, <i>see</i> Niobium oxides.	8636
Nirvanidae, catalog	1651
Nitrates, rare earth, acute mammalian toxicity	18502
<i>see also</i> Ammonium nitrates.	
Nitrides:	
cerium, preparation of, USSR study	10620
iron catalysts in Fischer-Tropsch synthesis	19824
of 65 elements, thermodynamic properties	16318
<i>see also</i> Boron nitride—Vanadium nitride.	
Nitrogen:	
atom recombination at oxide surfaces and effect of Tesla discharge on recombination heat transfer	3151
carbon-dioxide and nitrogen mixtures behind normal shock wave, thermodynamic properties	7257
choking 2-phase flow literature summary and idealized design solutions	18191
compounds—	
microhydrogenation identifying technique	1236
minerals yearbook chapter	18086
polar material in distillate fuel, separation, etc.	19869
fertilization of irrigated winter wheat in western Kansas	16759
fixed processes	10938

	Entry		Entry
Nitrogen—Continued		Noncitizens, <i>see</i> Aliens.	
gaseous tissue, of rats exposed to simulated altitude and high concentrations of nitrogen.....	16790	Noncommissioned officers, <i>see</i> Air Force.	
plasma afterglows, investigation.....	21008	Nondetrimental siliceous sediments.....	2351
real-gas hypersonic-nozzle flow parameters in thermodynamic equilibrium.....	20997	Nondiscrimination in federally assisted education programs.....	17168
status of corn, evaluation by tissue tests.....	7542	Nonferrous alloys, <i>see</i> Alloys.	
sweat excretion in relation to balance, environment and physical activity.....	1812	Nonferrous castings, <i>see</i> Castings.	
thermodynamic properties from 114 to 540°R between 1.0 and 3000 psia.....	3177	Nonferrous metals, <i>see</i> Metals.	
vapor-liquid equilibria for helium-nitrogen-methane system.....	7215	Nonlinear effects and parametric resonance during interaction of waves in waveguide systems with long electron flows.....	10752
vibrational-nonequilibrium flow in hypersonic nozzles.....	12880	Nonlinear equations, <i>see</i> Equations.	
Nitrogen dioxide, NO <sub>2</sub> in Martian atmosphere.....	18119	Nonmetals:	
Nitrogen tetroxide, hydrazine reaction, mechanism and chemical inhibition.....	11475	industries—	
Nitrous oxide, flames, sampling measurements downstream.....	1308	employment and injuries, minerals yearbook chapter.....	19830
Nix, Willie L., heating and impact tests on insulated and uninsulated ballistic-missile fuse mechanisms.....	18127	injury experience, 1959.....	19835
NLRB, <i>see</i> National Labor Relations Board.		materials for sliding bearings suitable for chemical machine construction.....	20315
Nobel, Alfred, our heritage from Alfred Nobel (remarks).....	9698	nonmetallic crude materials, Federal item identification guides for supply cataloging supplements.....	3658
Nobel prize winner, Lev Davidovich Landau, USSR.....	10663	nonmetallic fabricated materials, Federal item identification guides for supply cataloging supplements.....	3658
Nobelmann, Eli E., Government competition with private enterprise.....	13807	Nonprofit organizations, Federal research contractors, staff study.....	6205
Noctilucent clouds, <i>see</i> Clouds.		Nonuniform burnup and poisoning effects in reactor and validity of uniform approximation.....	7229
Noise:		Noradrenaline, effects on ear vessel in cold- and warm-adapted rabbits.....	18470
aircraft—		Nordberg, William, temperature, etc., measurement over Wallops Island, Va.....	7287
ground effect, persons and property, investigation—		Nordin, Carl F., Jr., suspended sediment, middle Rio Grande.....	19319
hearings.....	6198	Norepinephrine:	
report.....	6117	calorigenesis, effects on pulmonary function of cold acclimatized rats.....	18474
control in ships, USSR study.....	8536	cardiovascular effects in warm- and cold-acclimatized rats.....	13206
helicopters, origin and means of reducing.....	3383	output, effect of cold and smoking.....	16804
impact, control in multifamily dwellings, guide.....	8235	Norfolk, Va.:	
in-flight aerodynamic measurements on Scout launch vehicle.....	14561	Municipal Airport, weather observations, hourly, decennial census.....	11405
in hospitals, study of types affecting patients.....	14665	occupational wage survey—	
loud sounds effects on physiology and behavior of swine.....	5846	departmental edition.....	16286
perceived level, effects of spectral content and duration.....	9191	document edition.....	15177
pneumatic rock drill, measurement and significance.....	5491	Norgren, Carl T., effect of fuel injectors, etc., on performance of annular turbojet combustor.....	14529
radio, quarterly data.....	9209, 12900	Normal probability function, tables for integral of circular bivariate normal frequency.....	14562
rocket-powered vehicle, measurements during captive and launch firings.....	1298	Norman, James M., relief.....	7888
<i>see also</i> Radar—Sonic boom.		Norman, Lindsay D.:	
NOL, <i>see</i> Naval Ordnance Laboratory, White Oak, Md.		chloride and fixed nitrogen processes.....	10938
Nolan, Loretto R.:		pyrometallurgical processes for recovering manganese from U.S. resources.....	1204
analysis of work stoppages, 1961—	1169	Norment, H. G.:	
work stoppages, Government employees, 1942-61.....	10893	collection of Fortran programs for crystal structure analysis.....	18237
Nolan, Robert L., relief.....	13512, 19002, 20416	X-ray diffraction data reduction program for IBM 704 and 7090.....	9273
Noll, Richard B., slideout dynamics of vehicle equipped with trip-cycle skid-type landing-gear system.....	11071, 19911	Norris, Tenn.:	
Nomenclature, <i>see</i> subjects.		watershed, multiple use.....	14745
Nominations, Civil Aeronautics Administration, etc., hearings.....	2090	management objectives.....	7473
<i>see also</i> names of persons.		North, Arthur, quality typography from computer data, photo-composition of Patent Office attorneys roster, etc.....	16480
Noncash items, collection, regulation, amendment.....	8259		

# INDEX 1963

	Entry		Entry
North (U.S.):		North Dakota:	
merchantable hardwood hemlock		annual survey of manufactures,	
stands, porcupine winter feed-		1961, standard metropolitan	
ing activity-----	15563	statistical areas and large in-	
North America:		dustrial counties, statistics----	4567
Atlantic Coast, tidal current tables	18741	climatological data-----	3517
beetles, genus <i>Onthophagus</i> , nomen-		county business patterns, activities	
clatorial history-----	3183	covered by OASDI program----	13284
east coast--		electric rate book-----	13920
lights and fog signals, list-----	3208	5B redevelopment area, statistical	
tide tables, 1964-----	5651, 9258	profile-----	15134
moths, genus <i>Acleris</i> -----	9766	hydrocracking low-temperature tar	
Pacific Coast, tidal current tables	11115	from lignite-----	10966
regional broadcasting agreement,	18742	mineral industry, minerals year-	
report-----	20537	book chapter-----	1219
west coast--		population, 1960, characteristics----	20348
lights and fog signals, list,		precipitation data, hourly-----	3771
change-----	5652	statue of John Burke--	
tide tables, 1964-----	6040	acceptance, print proceedings,	
North Atlantic Coast, <i>see</i> Atlantic		report-----	13529
Coast.		place in Statuary Hall, reports----	8085
North Atlantic Ocean, <i>see</i> Atlantic		weather stations, decadal census----	9871, 13528
Ocean.		wheat growers' machinery costs----	16680
North Atlantic Treaty Organization:		ZIP code directory-----	6315
goals for Atlantic community, ad-		North Korea, <i>see</i> Korea.	20058
dress by President Kennedy-----	14934	North Little Rock, Ark.:	
military aid to western Europe,		occupational wage survey--	
subcommittee report-----	11900	departmental edition-----	1176
parliamentarians' conference,		document edition-----	281
1962--		North Loup division, <i>see</i> Missouri	
report of House delegation-----	9913	River Basin project.	
report of Senate delegation-----	10012	North Miami Beach, Fla., dedication	
parliamentarians' conferences		of city hall (remarks)-----	6052
house delegation, implement		North Platte River and Valley, cattle-	
act of July 11, 1956, report----	20476	feeding industry, changes	
problems and trends in Atlantic		1953-59-----	10052
partnership-----	11921	North Sanpete watershed project, propo-	
print as Senate document, re-		posal, hearing-----	13822
port-----	11989	North Sea:	
North Beach of Potomac River, <i>see</i>		eastern shores, sailing directions----	18215
Potomac River and Valley.		lights and fog signals, list-----	3200, 21052
North Borneo, <i>see</i> Borneo.		North Tonawanda, N.Y., railroad ac-	
North Carolina:		cident-----	8436
annual survey of manufactures,		North Vietnam, <i>see</i> Vietnam.	
1961, standard metropolitan		Northeast (U.S.):	
statistical areas, and large in-		community economic redevelopment	
dustrial counties, statistics----	4568	programs, case studies-----	16817
Cape Fear River Basin, flood con-		facts about skier market-----	18533
trol, engineer report--		flight information publication, en-	
departmental edition-----	402	route-high altitude-----	3691
document edition-----	246	principal electric facilities, map----	516
Charter tercentenary celebration		Northeastern Forest Experiment Sta-	
(address)-----	13337	tion:	
civil rights, public schools, 1962--	1935	annual report, 1962-----	12152
climatological data-----	3517	forest research notes-----	6490, 10217-220
commercial tobacco farms, cost and		station paper-----	10221
returns, 1962-----	12045	Northeastern Resources Commission,	
county business patterns, activities		create, hearing-----	6304
covered by OASDI program-----	15052	Northeastern States, <i>see</i> Northeast	
electric rate book-----	511, 13919	(U.S.).	
equal protection of laws, North		Northeastern Water and Related	
Carolina State Advisory Com-		Land Resources Compact, con-	
mittee report-----	6021, 18719	sent of Congress, hearing-----	6304
farm problems and prospects (re-		Northern Forest Experiment Station,	
marks)-----	1667	technical note-----	12159
5B redevelopment area, statistical		Northern Great Lakes Regional Land	
profile-----	11697	and People Conference keynote	
hurricanes, descriptive listing of		address-----	20283
tropical cyclones-----	9503	Northern Hemisphere, <i>see</i> Hemi-	
landings, fish and shellfish--	3971, 13946	sphere, Northern.	
marketing farmers' stock peanuts--	9579, 13174	Northern Ireland, <i>see</i> Great Britain.	
mineral industry, minerals year-		Northern operations-----	5910
book chapter-----	20961	Northern Regional Research Labora-	
population, 1960, characteristics----	13276	tory:	
precipitation data, hourly-----	3771	publications and patents, lists--	
slate belt, geology-----	15602	chemically modified oil products	
weather stations, decadal census----	16679	and industrial uses-----	5797
ZIP code directory-----	20057	industrial uses of proteins-----	5798
North Central region, <i>see</i> Central		oilseed crops research-----	5799
States.		oilseeds, oil, and meal process-	
North Central States, <i>see</i> Central		ing-----	5794
States.		soybean edible protein products----	5796
		soybean oil, edible-----	5795

# JANUARY-DECEMBER

Entry	Entry
Northern Regional Research Laboratory—Continued	Notices to airmen, international notams..... 3798
publications list, oilseeds composition..... 5793	Notifiable diseases, <i>see</i> Contagion and contagious diseases.
Northern Utilization Research and Development Division:	Notre Dame, University of, radiation chemistry, activities past and present (remarks)..... 16863
organization, research programs, etc..... 16	Nova Lima quadrangle, Brazil, geology and ore deposits..... 601
publications and patents, list..... 7553, 16720	Novak, A. P., radiation pasteurization of shrimp..... 11568
Northey, W. T., interrelationship of cold environment, immunity, etc..... 14908	Novosibirsk, Russian SFSR, engineering institute of geodesy, etc., 30th anniversary, USSR study..... 19420
Northumberland County, Va., soil survey..... 13058	Nowak, W. B., research, etc., in metallurgy, conceptual design of U-233 fuel refabrication plant..... 7703
Northwest (U.S.):	Noyo River and Harbor:
coastal area, spiny dogfish, control, etc..... 19242	engineer report—
flight information publication, enroute-high altitude..... 3692	departmental edition..... 443
ground water levels, 1956-60..... 17533	document edition..... 316
halloysitic clay, physical and chemical properties..... 10947	Nozzles:
Pacific Northwest—	asymmetric penshape in jet-canard configurations for attitude control..... 19906
aluminum fabrication, economic survey..... 1201	bell-shaped, comparison of experimental to predicted heat transfer..... 16371
commercial wheat farms, costs and returns, 1962..... 15413	conical, overexpanded performance with and without supersonic external flow..... 5558
current discharge at selected stations..... 4212	ejector-type exhaust, thrust and pumping characteristics..... 5516
fire season, 1962..... 8292	exhaust, dissociation effect on performance..... 16356
Forest Service land exchanges, GAO review..... 2325	hypersonic contours, real gas effects with methods of calculation..... 9160
month-end storage in major reservoirs..... 4212	hypersonic, vibrational-nonequilibrium flow of nitrogen..... 12880
power consumer preference, hearing..... 8119	hypervelocity, air-flow properties in equilibrium and frozen flows, errata..... 3117
principal electric facilities, map..... 519	materials in solid-propellant rocket engine, erosion resistance and failure mechanisms..... 5603
soil and water conservation research..... 16750	nuclear rocket, convective heat transfer..... 18141
water resources—	orbital-launch nuclear rocket, optimizing performance..... 9154
annual peak discharge at selected gaging stations, 1962-63..... 17520	plug, with concave central base, with and without terminal fairings performance at transonic speeds..... 12877
summary..... 20731	rocket-engine ablative-material performance after postburn cooling at altitude pressures..... 12863
weekly report..... 4002	rocket motor, numerical method for determining thermal stresses involving plastic flow..... 3223
Northwest Airlines, Inc., accidents..... 179, 1931, 18709	Saturn C-1 model, supersonic investigation of hinge moments with and without jet flow..... 20988
Northwestern States, <i>see</i> Northwest (U.S.).	variable-throat-area convergent-divergent, effect on thrust modulation of solid propellant rockets, investigation..... 10991
Norvitch, R. F., geology and hydrology of Elk River, Minn., nuclear-reactor site..... 14016	NPIP, <i>see</i> Poultry.
Norway:	NPS national prisoner statistics series..... 9328, 11212
civil aviation, survey..... 5985	NRAB, <i>see</i> National Railroad Adjustment Board.
economic developments, 1962..... 8400	NRL, <i>see</i> Naval Research Laboratory.
educational research..... 15430	NROTC, <i>see</i> Naval Reserve Officers Training Corps.
lights and fog signals, list..... 1364, 21053	NSF, <i>see</i> National Science Foundation.
loan of vessel, agreement extension..... 9424	NSLI, <i>see</i> Life Insurance.
Norwegian Constitution Day, observance (address)..... 14847	NTIP, <i>see</i> Turkey.
sending gift packages to..... 2412	Nuclear bomb effects computer, including slide-rule design and curve fits for weapons effects..... 5929
southwest coast, sailing directions, change..... 7348	
tax convention, ratification, report-trade mission to, 1963..... 20535	
trade mission to, 1963..... 17564	
Norway rat, <i>see</i> Rats.	
Nose (aircraft):	
blunt bodies, etc., effects on static aerodynamic characteristics..... 11058	
flat-face conical, heat transfer measurements at Mach nos. to 14.6..... 14535	
Notice to aviators..... 3972	
Notice to mariners..... 3973	
chart correction list..... 11141	
Great Lakes and tributary waters..... 3974	
Notices of judgment:	
food, drug, and cosmetic act..... 3975-76	
judicial review of orders, summary..... 10205	
hazardous substances labeling act..... 17469	
insecticide, fungicide and rodenticide act..... 9549, 16718	

# INDEX 1963

Entry	Entry
Nuclear chemistry, <i>see</i> Radiochemistry.	
Nuclear design calculations, NDC- Fortran program for rodclust- tered pressure-tube lattices.-----	16834
Nuclear energy, <i>see</i> Atomic energy.	
Nuclear engineering: education, progress, conference pro- ceedings -----	5945
materials list -----	133, 16857
Nuclear explosions: aerial photographic analysis.-----	14996
artificial radiation belt made on July 9, 1962, characteristics, status report -----	9171
continuity of corporate manage- ment in event of nuclear at- tack -----	11652
cratering device influence on close- in populations of lizards -----	11575
cratering experiment -----	16853
conducted at Nevada test site.---	11573
desert alluvium, seismic effects.---	
design of hardened structures to resist effects, principles and practices, Air Force design manual -----	11487
electron density of ionospheric wavemotions caused by detona- tions -----	13198
enemy attack, what targets might be bombed? -----	10146
excavation in Ogotoruk Creek area, Alaska, effects -----	4494
geologic effects of high-explosive tests in USGS tunnel area, Ne- vada test site -----	5021
geologic investigations related to nuclear explosions (series) ---	5021, 19315, 16145
Injuries, USSR study -----	4369
livestock survival after fallout from nuclear attack -----	10138
milk protection after nuclear at- tack -----	18599
Nevada Test Site, Sept. 15, 1961- Sept. 15, 1962, off-site environ- ment contamination -----	5929
nuclear bomb effects computer, in- cluding slide-rule design and curve fits for weapons effects.---	141
Operation Plumbbob -----	16861
blast effects on air-cleaning sys- tem -----	7707
protection against fallout radia- tion in simple structure -----	20949
peaceful uses, bibliography.-----	10128
Project Gnome, methods and costs of shaft sinking -----	5935
rural areas, effect of attack -----	4367
SL-1 accident recovery operation, final report -----	13232, 13234
soil, crops, and fallout from nu- clear attack -----	16869
test ban treaty -----	8110, 17310
addresses by President Kennedy.---	18911, 17287
banning tests in atmosphere, outer space and under water, text and President Kennedy's address -----	16821
hearings -----	18971
print additional copies, re- ports -----	14935
questions and answers.-----	17782
report -----	11530
step toward peace, report to peo- ple, address by President Ken- nedy -----	3341
West and East German signa- tures, German article.-----	
why, U.S. policy statements, etc. tests, discontinuance, Geneva Con- ference, guide -----	
Nuclear explosions--Continued	
timing and firing, Project Sedan.---	11579
underground detonations-- close-in effects on--	
small mammals and inverte- brates -----	11576
vegetation, caused by crater- ing, throw-out, and blast damages -----	11577
particle motion near nuclear de- tonation in halite.-----	18585
radiochemical and physical mea- surements of debris -----	11578
water for use after nuclear attack.---	10139
weapons tests--	
statement by Adlai E. Stevenson, Oct. 10, 1962 -----	1795
technical capabilities for detect- ing and identifying, hearings.---	9812
weather and surface radiation pre- dictions for Project Sedan.-----	14994
Nuclear fuel, <i>see</i> Reactor fuels.	
Nuclear Fuel Services Reprocessing Plant, ground-breaking cere- mony (remarks) -----	11592
Nuclear medicine, new frontiers (re- marks) -----	1845
Nuclear physics: controlled nuclear fusion research, conference proceedings, Salz- burg, Sept. 4-9, 1961.-----	14958
high temperature heat physics, USSR study -----	8856
nuclear theory reference book--	
1957-58 -----	11590
1959-60 -----	13250
reactor physics constants.-----	16833
use of heavy-water reactor for ex- perimental work, USSR study.---	19651
Nuclear power, <i>see</i> Atomic energy.	
Nuclear power plants, <i>see</i> Nuclear re- actor power plants.	
Nuclear powered ships: dosimetric control on atomic ships.---	2530
N.S. Savannah--	
maritime matters--	
operational arrangements for visit to Netherlands, agree- ment -----	16582
public liability for damage caused, agreement with Netherlands -----	16581
safety assessment -----	18596
upgrading analog computer anal- ysis -----	5924
Navy training program, informa- tion -----	3214
submarine components, Westing- house subcontracts, GAO inves- tigation into pricing.-----	2321
submarines, atmospheres--	
analysis and removal of organic contaminants -----	11162
purification and control, status of chemical research.-----	11165
U.S.S. Enterprise, tour, hearing.---	208
Nuclear radiation, <i>see</i> Radiation.	
Nuclear reactions, cosmic ray induced stable and radioactive nuclides in meteorites -----	14570
Nuclear reactor power plants:	
Army nuclear power program.---	19129
Army program, code development program, water-moderated ar- rays of uranium and stain- less steel -----	126
boiling water-separate superheat reactor plant, 600 MWe, de- sign study -----	7696
civilian nuclear power program, ec- onomic benefits from continu- ing, evaluation -----	15000



# JANUARY-DECEMBER

	Entry
Nuclear reactor power plants—Con. comparison of nuclear defense capabilities with coal-fired power plants	4476
cost evaluation guide, supp.	15004
development of nuclear energy and tasks of electrical and machine building industries, Yugoslavia study	5193
Hanford new production reactor, proposed arrangements for electric generating facilities, hearing	1969
in-core power monitoring of nuclear reactors	7692
land easement at Camp Pendleton law reports	15161
marking system for valves, fittings, flanges, unions, Federal standard	13752
mercury binary cycles, study	2281
operation and maintenance of experimental gas-cooled reactor	16860
PM program, research and development task 1.0, core 2 final design report	16852
PM-1 program—final progress report	18580
plant performance studies, final periodic report	18578
power conversion, unit study	18579
selected reactors of power reactor demonstration program, literature search	14977
sodium-heated steam generator summary	15003
superheat meeting	15012
utilization in underground installations, engineer manual	9688
thermal flux liquid metal package loop design criteria, summary report	10088
thermodynamic cycles of atomic power stations with MHD generator, USSR study	18575
water cooled thermionic plant feasibility study	19543
Nuclear reactors, <i>see</i> Reactors (atomic).	11563
Nuclear Research, Joint Institute for, <i>see</i> Joint Institute for Nuclear Research.	
Nuclear rockets, <i>see</i> Rockets.	
Nuclear safety, review of recent developments	3977
Nuclear science—abstracts	3978
index, cumulative—report number, with public availability citations	5953
quarterly computer applications to nuclear and radiochemistry	3979
conference literature, availability	9681
education, progress, conference proceedings	18601
literature, management and use, conference, proceedings	5945
nuclear science and technology, Yugoslavian study	1840
series	15905
Yugoslavia, developments	16849
Nuclear superheat project: 12th quarterly report, Apr.-June 1963	19618
13th quarterly report, July-Sept. 1962	16837
Nuclear tests, <i>see</i> Nuclear explosions.	
Nuclear warfare, <i>see</i> Atomic warfare.	
Nuclear weapons, <i>see</i> Weapons.	
Nuclei: hydrogen, helium and heavy nuclei in 1960 solar cosmic ray event	16837
	11051

	Entry
Nuclei—Continued	
light, medium, and heavy, in primary cosmic radiation, Cerenkov-scintillation counter measurements	16375
Nucleic acids: and biosynthesis of proteins, Communist Chinese study	15889
and evolution in algae, literature data	18516
chemical synthesis, USSR study	12495
content in nerve cells in various functional states, USSR study	17810
content in organs of healthy and irradiated rats, effect of sodium gallate, USSR study	12445
translations, USSR	6750
Nucleoli, <i>see</i> Cells.	
Nucleonics (Polish periodical): translations	6782
Nucleotides, code and regulation of protein synthesis in cell, USSR study	6884
<i>see also</i> Phosphopyridine nucleotides—Radionuclides.	
Nuclides, <i>see</i> Radionuclides.	
Nugent, Jack: flight tests of twin-duct introduction system for Mach number range of 0.78 to 2.07	11001
lift and drag of swept-wing fighter airplane at transonic and supersonic speeds	10983
Nukleonika (periodical): translations	6782
Numerical calculations: calculating methods on treatment of observations, new approaches, USSR study	2599
computing effect of additional observation on previous least-squares estimate	3156
potential and effective diffusion constant in polyelectrolyte solution	14602
runoff from impervious surfaces, numerical computations	19151
satellite track computation for display purposes	7368
simple methods of estimating nonlinear functions with emphasis on agricultural data	18417
side computation in electronic geodetic trilateration by circular surveying system, Polish study	7004
two-dimensional, criticality of gaseous-core cylindrical-cavity reactors	7260
Numerical evaluation of ion-thruster optics	11042
Numerical lists and schedule of volumes of reports and documents: 85th Congress, 2d session, errata	9330
87th Congress, 2d session	11217
Numerical procedure for shock and Fourier analysis	3225
Numerical solution of problem of mixing of laminar coaxial streams of greatly different densities, isothermal case	7251
Nupen, Wilhelm, bibliography on atmospheric aspects of radio astronomy	11100
Nurse Corps, Air Force, walk proudly into future as Air Force nurse	88
Nurse Corps, Army, education opportunities for students	1815
Nurseries (horticulture): bibliography on business	11276
European pine shoot moth, eradicating with methyl bromide	15582
nursery products, production and sales, 1961 and 1962	14736

# INDEX 1963

Entry	Entry
Nurseries (horticulture)—Continued	Nutrias, <i>see</i> Coypou.
nursery stock, quarantine, proposed	Nutrition:
amendment, hearings----- 6182	and consumer-use research, publi-
ponderosa pine, grown in Calif.	cations, list----- 20269
nurseries, seed origin and size	and school lunch, bibliography----- 18403
of planting stock----- 15574	child nutrition, Agriculture Dept.
<i>see also</i> Forest nurseries.	aids----- 14815
Nursery schools, <i>see</i> Day care of	Clinical Center diet manual----- 12904
children.	committee news----- 8980
Nursery stock, <i>see</i> Nurseries (horti-	facts----- 9223
culture).	food for fitness, daily guide----- 16743
Nurses and nursing:	nutrition program news (periodi-
better assignment and utilization of	cal)----- 18411
personnel (address)----- 21079	problems of nutrition (USSR pe-
cancer manual for public health	riodical)----- 1055
nurses----- 20091	rotifer, USSR study----- 10774
cardiovascular disease patients,	science, technology and develop-
services outside hospital----- 9345	ment in less developed areas----- 5096
care of long-term patient----- 13109	teenage, selected programs for im-
career opportunities-----	proving----- 20663
chief, nursing service training	USSR reports----- 15935, 19473
program, facts----- 7503	<i>see also</i> Food.
Veterans Administration----- 11375, 18361	Nutrition Laboratory, <i>see</i> Army Medical
civil defense, responsibilities----- 6020	Laboratory and Nutrition
nursing at Clinical Center, NIH----- 11108	Laboratory.
practical, licensing, etc., in D.C.	Nuts:
amend act, reports----- 15370, 20488	foreign agriculture circulars----- 3720
professional nurses-----	foreign trade prospects----- 2306
registration as staff officers in	production, use, value, by States,
merchant marine-----	1961-62----- 16624
law----- 18775	Nyasaland and Rhodesia, Federation
reports----- 11825, 17276	of, <i>see</i> Federation of Rhodesia
traineeship program of PHS,	and Nyasaland.
short-term training courses----- 5695,	Nye County, Nev.:
14671	Nevada Test Site, water wells in
public health nurses, mental health	Frenchman and Yucca valleys----- 130
followup project, report----- 12040	Paleozoic rocks of Antelope Valley
public health service, employed in	area----- 10291
U.S., Puerto Rico, Virgin Is-	Nystagmus:
lands, number and educational	recording, chronically implanted
preparation----- 3295	electrode----- 7630
registration in D.C., lower minimum	secondary and inverted primary,
age limitation-----	elicitation from cat by unilat-
law----- 15160	eral caloric irrigation----- 16865
reports----- 6155, 13785	vestibular, human, induced by cal-
role of nurse in rehabilitation----- 1587	oric irrigation and angular ac-
schools of nursing offering trainee-	celerations, manipulation of
ships for full-time academic	arousal and its effects----- 1849
study, 1963-64, list----- 13025	vestibular reflexes, habituation in
towards quality in nursing, needs	decorticated cats, studies----- 20312
and goals, report----- 7414	
<i>see also</i> Nurse Corps, Army.	
Nursing homes:	
administrators, guide for----- 21088	
care for veterans, report----- 15291	
environmental health factors----- 12999-	
13019	
Federal aid for construction, expan-	
sion, etc., information----- 20078	
minimum property standards----- 19184	
mortgage insurance, FHA program,	
nursing homes and related facili-	
ties----- 15490	
characteristics, 1961, nationwide	
inventory report----- 20103	
fact book, reports-analyses----- 7405	
State and local surveys, an-	
notated studies----- 11238	
nursing homes, related facilities,	
and programs----- 15623	
professional personnel in nursing	
homes (address)----- 18291	
publications, list----- 18282	
Nursing School, Freedmen's Hospital,	
<i>see</i> Freedmen's Hospital School	
of Nursing.	
Nursing Service, Veterans Adminis-	
tration, your bright career as	
nurse----- 18361	
Nusbaum, William J., high subsonic	
Mach number turbine having	
high rotor blade suction-sur-	
face diffusion----- 5522	
Nuta, Alexander, legal aspects of se-	
lective service----- 9378	

# JANUARY-DECEMBER

	Entry
Oak brush, livestock poisoning in Western States, reducing losses -----	14850
Oak Ridge, Tenn., meteorological data -----	7705
Oak Ridge National Laboratory, characterization of uranium dioxide, meeting -----	1838
Oakland, Calif.: income, education, and unemployment in neighborhoods -----	10916
Metropolitan Oakland International Airport, weather observations, hourly, decennial census -----	9495
occupational wage survey—departmental edition -----	10898
document edition -----	9819
OAR, see Aerospace Research Office.	
OASDI, see Old age, survivors, and disability insurance.	
OASI series -----	1376
5061-63, 7374-77, 9305-9, 11281-286, 13045-49, 16562, 18312-314, 30133-134, 21109-111.	
Oats: futures—	
commitments of traders -----	3530
trading and open contracts -----	3752
Ob River, lower, reference and guide book, USSR study -----	5225
Oberdorfer, Paul W., relief -----	15226
Obert, Leonard A.: triaxial apparatus for testing mine rock -----	20972
underground borate mining, Kern County, Calif. -----	3073
Obesity, human body fat, measurement methods -----	16803
Obligations, see Contracts.	
Obourn, Ellsworth S.: aids for teaching science, suggestions for starting process teaching -----	15446
science and mathematics teachers in public high schools -----	17393
OBR series -----	2383-2400
5061-90, 6586-6621, 8378-8420, 10330-334, 12253-257, 15647-652, 17554-561, 19355-358, 20756-757.	
Obratsov, Nicholas S., North American moths of genus <i>Acleris</i> -----	11115
O'Brien, John A., address, Nov. 5, 1963 -----	20666
Observations, see names of observatories.	
Observatory generation of satellites, papers -----	10988
Observer tolerance of form transformation as function of form complexity -----	14914
Obstetrics, maternal and newborn care in fallout shelters -----	11643
Obstruction marking and lighting -----	484
Oculations, see Eclipses.	
Occupational diseases, hazards, estimation through medical care plans -----	9339
Occupational earnings in major labor markets, 1962-63 -----	9079, 16298
Occupational health, see Health.	
Occupational therapists: career in medical care programs, in PHS hospitals -----	9346
examination announcement -----	195, 13321
discontinuance notice -----	187-88
Occupational wage survey, see Wages.	
Occupations: Army recruiting and career counseling journal -----	4136
by industry, census of population, 1960 -----	11640

	Entry
Occupations—Continued	
career opportunities—	
aerospace information -----	4824
agricultural economics and statistics -----	1686
Army career, commander's counseling guide -----	11541
Army Medical Service, graduate students in clinical psychology -----	117
Atomic Energy Commission, internships, etc., for college graduates -----	18606
career planning for reserve officers -----	11537
chief, nursing service training program, facts -----	7503
civilian job opportunities, Army Dept -----	11531
civilian scientists, engineers, etc., in Air Force Dept -----	1748
crops research -----	1710
dietitians, Veterans Administration -----	11374
DSA civilian program for quality control and inspection -----	15408
DSA civilian trainee program -----	13833
Education Office, handbook -----	17377
engineers—	
Federal Government -----	1944
Tennessee Valley Authority -----	7476
Federal directory for college students -----	4623
fishery and wildlife biologists, brochure -----	4940
Foreign Service staff -----	16569
Housing and Home Finance Agency, financial analysts -----	16965
Internal Revenue Service, tax work -----	2370
nursing at Clinical Center, NIH -----	11108
professional—	
accounting at General Accounting Office -----	17515
auditing with Army Audit Agency -----	4468
Social Security Administration, professions -----	20135
Veterans Administration -----	13110, 18360
Public Health Service—	
engineers -----	16495
hospitals, physical therapists -----	9347
medical services -----	20092
psychiatry -----	9220
Public Roads Bureau, right-of-way training program -----	11251
scientific, in Commissioned Officer Corps, C&GS -----	20389
secretaries in Budget Bureau -----	1854
supervisor development program, basic course -----	4450
teaching -----	13869
Tennessee Valley Authority -----	7477
TVA and engineering -----	7475
Veterans Administration Nursing Service -----	18361
veterinarians, Agricultural Research Service -----	4364-65
wage-hour investigator -----	20226
water supply and pollution control -----	18283
women—	
in retailing -----	5772
in science (paper) -----	16697
changing patterns in railroad industry, 1947-60—	
departmental edition -----	9053
document edition -----	7836
coded titles in trade and industrial education, list -----	10063
earnings and education, by color, 18-64 yrs -----	15084

# INDEX 1963

	Entry
Occupations—Continued	
education for changing world of work, report of Panel of Consultants on Vocational Education	10060, 13844-846
summary	2150
electronics manufacturing, changing structure	20928
Federal—	
blue collar occupational families and series, handbook	16951-952
blue-collar workers	18733
career directory for college students	16945
careers	18734
position classification plan	3762
white-collar workers	9758
hazardous duty pay for Government employees, amend act—	
hearing	8008
report	7950
hazards to young workers, report	18027
job guide for young workers	4835
labor force, civilian, experienced, census of population, 1960, supplementary reports	4575
mortality statistics, men, ages 20-64	20013, 20115
outlook—	
1970	9080
quarterly	3982
publications, list	14653
safety publications	18028
veterans, service-connected psychoses and psychoneuroses, employment adjustment	11372
WAC officers, selected for success, career information	111
see also Employment—Military occupational specialties.	
Occupations and Professions Department of District of Columbia, see District of Columbia.	
Ocean:	
as power station, USSR study	17863
biological indicators of weak radioactive contaminations in northern seas, USSR study	8992
climatic review	3883
conservation has gone to sea, program of Commercial Fisheries Bureau	4951
discriminatory freight rates and balance of payments, hearings	17054, 20447
law of the sea, convention on high seas, adopted by UN conference, Geneva, Apr. 29, 1958	5728
marine meteorological observations, manual	3398
physics of sound in sea	19983
pollution by oil, international convention for prevention—	
report	20540
text	8025, 20517
ray acoustical model using depth-sound speed profile with continuous 1st derivative	11178
riches, prospects for developing, USSR study	8834
sea, conservation note	2286
sea reveals its mysteries, studies of V. P. Zenkovich, USSR	8971
sonic depth measured by fathometers, use of Ladoga apparatus for recording, USSR study	6795
surface viscosity of monomolecular films on water at low pressures, literature survey	12949
waves, energy, electrical calorimeter for measuring	11159
see also Sea water.	

	Entry
Ocean currents:	
China coastal waters, relationship between winds and surface currents	15665
tidal tables—	
Atlantic Coast of North America	18741
Pacific Coast of North America and Asia	18742
Ocean temperature, Pacific, eastern tropical, sea surface, monthly average and anomaly charts, 1947-58	10202
Oceania:	
agricultural situation, 1963	10055
contributions to hydrology of Asia and Oceania (series)	17580
Oceanographer, employment outlook	9065
Oceanography:	
act of 1963, report	15262
bibliography	149
Biological Laboratory, Honolulu, progress in 1961-62	15518
books, selected list	10193
east Coast of U.S., observations, 1960	13972
Hawaiian waters data, Jan.-July 1961	557
marine geophysical exploration	6866
marine surveying and observations, USSR study	19712
research—	
data on promising fishing region, USSR study	14187
Soviet comments	12714
telemetering systems, problems	20001
underwater geology, USSR studies	14310
underwater research, USSR data	19736
USSR—	
developments	19580
marine research	19714
studies	19464
Oceanology (USSR periodical): translations	8759, 10550, 10771
Ocmulgee National Monument general information	12928
Oconee County, S.C., soil survey	13053
O'Connell, Charles P., towed pump and shipboard filtering system for sampling small zooplankters	13975
O'Connor, Charles M.: industry wage survey—	
fertilizer manufacturing	14473
hosiery, Feb. 1962	5448
wool textiles, June 1962	18041
OCS, see Officer candidates school.	
Octacosanol, effect on performance of swimming rats	7687
O'Day, James, long-distance navigation techniques	11595
Odegard, Robert J.: contested election, notice of dismissal, etc.	4725
hearing	9938
Odessa, Ukrainian SSR, new harbor, construction	2465
Odometers, accuracy, technical investigation report	18104
O'Donnell, John A., activities, hearing	10009
OEDP, see Redevelopment (city planning, etc.).	
OEP, see Emergency Planning Office.	
Offenbecker, Larry, National Cooperatives, Inc., pooled buying lowers costs for farmers	6383
Office buildings:	
postal service, planning and designing	14647
shelter incorporation	1934

# JANUARY-DECEMBER

	Entry
Office furniture and equipment:	
Federal item identification guides for supply cataloging, supplements	3659
office, computing, and accounting machines, current industrial reports	11626, 16891
small office automation, bibliography	11277
see also specific types of furniture, etc.	
Office machines, see Office furniture and equipment.	
Office space committee, see Federal Office Space Committee.	
Office supplies, and devices, Federal item identification guides for supply cataloging, supplements	3659
Office candidates school, Army, general information for applicants	14938
Officer Training School, Air Force, attitudes and career intentions of students	63
Officers, see names of services to which officers belong.	
Offices, see Office buildings.	
Official gazette of Patent Office	3983
Official publications, see Government publications.	
Oganovic, Nicholas J., address, May 9, 1963	13327
Ogden, Jean, west African community development stories	12261
Ogilvie, K. W., rocket observations of solar protons	21013
Oglala Indians, Oglala Sioux Tribe of Pine Ridge Reservation, convey lands in trust to, reports	7915-16, 19036-37
Ogotoruk Creek, bioenvironmental features of area	4494
O'Hara, G. J., numerical procedure for shock and Fourier analysis	3225
Ohio:	
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics	4566
climatological data	3517
county business patterns, activities covered by OASDI program	15049
electric rate book	15498
5B redevelopment area, statistical profile	9789
landings, fishery products	3986
mineral industry, minerals yearbook chapter	1220
population, 1960, characteristics	18660
precipitation data, hourly	3771
public school finance program 1962-63	12078
recreation, private outdoor and forest enterprises, directory	15556
sawmills, buying practices and markets, 1955-58	6481
Scioto River Basin, flood control survey, engineer report—departmental edition	4871
document edition	4690
spoil banks, hybrid poplar plantings	15559
weather stations, decadal census	16681
women, labor laws, summary	11415
women workers, 1960	14810
ZIP code directory	20059
Ohio River Division Laboratories technical report	13880
Ohman, Howard, notes on environmental conditions affecting military logistics in Thailand	1434
Ohman, John H., current status of sapstreak disease of sugar maple in Lake States	12175

	Entry
Oil, see Oils—Petroleum.	
Oil burners, maple sap evaporators, construction	4341
Oil fields, see Petroleum.	
Oil films, plankton, stability to artificial sunlight	3226
Oil Import Appeals Board:	
decisions	3987
press releases	4080
Oil paints, see Paint.	
Oil pipe lines, see Pipe lines.	
Oil refineries, see Petroleum refineries.	
Oil sand, see Sandstone.	
Oil shale:	
Colorado, oxidation	5492
Green River—	
from Colorado, physical structure	7220
oil yields from core and drilling sampling	19870
Oil tankers, see Tankers.	
Oilfields, see Petroleum.	
Oils:	
base for insecticide sprays in tobacco warehouses	7533
chemically modified products and industrial uses, list of publications and patents, 1936-61	5797
current industrial reports	1891, 3574, 7756, 11619, 16894
fats and oils situation	3645
Federal item identification guides for supply cataloging, supplements	3657
Federal supply catalog—	
identification list	19076
management data list	19077
food fats and oils, outlook, 1962-63 (remarks)	2140
foreign agriculture circulars	3720
infrared spectra	20296
processing, Northern Regional Research Laboratory, publications list	5794
see also Fuel oil—Lubricants—also names of oils.	
Oilseeds:	
and oilseed products, prospects for foreign trade	6480
composition, Northern Regional Research Laboratory, publications list	5793
crops, research, publications, 1936-61, list	5799
processing, Northern Regional Research Laboratory, publications list	5794
Okeanologiya (periodical):	
translations	8759, 10550, 10771
Okeechobee, Fla., railroad accident	12265
O'Keefe, John A., origin of tektites	21025
O'Kelley, G. D., computer applications to nuclear and radiochemistry	9681
O'Kelly, Burke R., free-flight tests of 45° swept wings of aspect ratio 3.15, etc.	16357
Okhotsk, Sea of, invertebrates, ecological characteristics of bottom communities, USSR study	5403
Okinawa, construction equipment held for non tactical use by military services, GAO review	12208
Okisly margantsa, translations	6655
Oklahoma:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4570
climatological data	3517
cotton cooperatives	6380
county business patterns, activities covered by OASDI program	13285, 18675



# INDEX 1963

Entry	Entry
Oklahoma—Continued	Old Harbor, aircraft accident..... 9736
diversified milk plants, production cost of cottage cheese and frozen desserts..... 14872	Olden, June H., fish farming industry..... 4948
5B redevelopment area statistical profile..... 13366	The older American..... 11209
floods of Apr.-June 1957..... 8352	Older workers, <i>see</i> Labor.
meat industry, structure, etc..... 12044	O'Leary, Timothy J.:
mineral industry, minerals yearbook, chapter..... 1221	horizontal tooth mobility, instrument for measuring..... 18504
population, 1960, characteristics..... 13277	screening examination for detection of gingival and periodontal breakdown, etc..... 18503
precipitation data, hourly..... 3771	Oleic acid:
ZIP code directory..... 20060	adsorption on fluorite, barite, and calcite, infrared studies..... 9130
Oklahoma City, Okla.:	oxidation products, radiomimetic effect, protective action of radioprotectors, USSR study..... 16151
income, education, and unemployment in neighborhoods..... 9073	Oleomargarine, New York City wholesale market facilities..... 1701
occupational wage survey—departmental edition..... 1175	Olfaction in fish, USSR..... 8858
document edition..... 280	Oligochaeta, <i>see</i> Annelida.
Will Rogers Field, weather observations, hourly, decennial census..... 11397	Oliver, W. B., snow surveys for Alaska..... 9380
Oklahoma Panhandle, water level fluctuations, correlation with climatic cycles..... 8356	Oliver, William A., Jr.:
Oklawaha River:	new Kodonophyllum and associated rugose corals from Lake Metapedia area, Quebec..... 6556
flood control, etc., engineer report—	redescription of 3 species of corals from dolomite in New York..... 6555
departmental edition..... 4856	Silurian rugose corals from Lake Témiscouats area, Quebec..... 6556
document edition..... 4689	Olivine, production, use, value, 1961-62..... 18340
Old age, <i>see</i> Aged.	Olivomycin, antibiotics, morphological action on cells of ascitic form of Ehrlich's tumor, USSR study..... 6704
Old-age and survivors insurance: explanation, adult education reader..... 7376	Olson, Alec G.:
OASI series..... 1376,	contested election, notice of dismissal, etc..... 4725
5661-63, 7374-77, 9305-9, 11281-286, 13045-49, 16562, 18312-314, 20133-134, 21109-111.	hearing..... 9938
<i>see also</i> Old age, survivors, and disability insurance.	Olson, Grant, economic developments in Sweden, 1962..... 8399
Old-Age and Survivors Insurance and Disability Insurance Trust Funds, <i>see</i> Board of Trustees of Federal Old-Age and Survivors Insurance Trust Funds.	Olson, Robert M., in vivo method to measure relative blood viscosity, etc..... 7631
Old age assistance: cases, specified types, monthly cost standards used by States, Jan. 1961..... 3328	Olson, Thomas A., Air Force resupply pallet tests..... 5861
program facts..... 10095	Olustee Arboretum, performance of forest trees..... 19269
social security rulings..... 4195	Olympic games:
Old-age, survivors, and disability insurance:	hold 1968 games in United States, invitation—
benefits under social security law..... 5662	law..... 17025, 18772
county business patterns..... 11614,	reports..... 13568, 15359, 17137
13281-286, 15049-55, 16889, 18669-678.	winter, Squaw Valley, Calif., 1960, incorporated, unauthorized use of Federal funds advanced to organizing committee for construction of sports arena, GAO review..... 20719
United States summary..... 16889	Olympic National Park, general information..... 16440
farm people, nature and scope of national social insurance program..... 11283	Omaha, Nebr.:
handbook..... 11283	Epply Airfield, weather observations, hourly, decennial census..... 11393
hospital insurance coverage of aged beneficiaries, national survey..... 9304	occupational wage survey—
impact of hospitalization costs on aged beneficiaries, national survey..... 9302	departmental edition..... 5440
national survey of beneficiaries, highlight report..... 9302-4	document edition..... 4696
program, 1961, covering workers also covered under State and local government retirement systems, survey..... 3244	Oman, amity, economic relations, and consular rights, treaty, text, report..... 20527
public information materials, illustrated catalog..... 1375	OME, <i>see</i> Minerals Exploration Office.
relatives in household of mother-child beneficiary groups, national survey..... 9303	Omniranges:
remarriage tables, based on experience under OASDI..... 14696	VHF, installation instructions, FAA handbook..... 10167
social security rulings..... 5722	VOR and VOT equipment modifications and instructions, reference handbook..... 10111
your social security, basic information..... 11281, 13047	Omohundro, Eleanor E., survey of common trust funds, 1962..... 13938
	On, F. J., mechanical impedance stimulation in shock and vibration testing..... 16389

	Entry
On-the-job training, <i>see</i> Employee training.	
Oncology:	
Moldavian SSR conference.....	19533
USSR, recent aspects.....	8808
<i>see also</i> Cancer.	
100 years after, newsletter of Civil War Centennial Commission.....	3088
One-two-three and the moon, Mercury, Gemini, Apollo, America's manned space flight program.....	12844
O'Neill, John P., static electricity.....	12780
ONI, <i>see</i> Naval Intelligence Office.	
Onions:	
quality changes during marketing, stocks, Jan. 1, 1963.....	5
Ontario, Calif.:	3366
occupational wage survey—	
departmental edition.....	5438
document edition.....	4694
Ontario, Lake, small craft, gale and whole gale warning facilities chart, 1963.....	13129
Onthophagus, <i>see</i> Beetles.	
OP series.....	1374
5660, 7372, 11194-195, 12950-960, 14635.	12950
Open market, <i>see</i> Markets and marketing.	
Open pit mining, <i>see</i> Mines and mining— <i>also</i> names of metals and minerals mined.	
Open-space land program guide.....	3392
Operation and maintenance equipment and procedures release, Reclamation Bureau.....	3995
Operation Plumbbob (nuclear effects test).....	141, 16861
Operation—volunteers, program to help the handicapped.....	10889
Operation Waterproof 4th grade.....	16515
Operations against guerrilla forces.....	1193
Operations research analysts, <i>see</i> Research analysts.	
Ophthalmology:	
northern Caucasus conference on sanatorium, etc., treatment of eye diseases, USSR report.....	19728
photostress and flash blindness—in aerospace operations.....	18507
study.....	4422
Opinions, <i>see</i> names of courts, etc., rendering opinions.	
Opium:	
production, trade and use, limitation, protocol.....	11306
traffic, 1962.....	16352
Oppegard, Blanche E.:	
international petroleum trade.....	3799
world retail prices and taxes on gasoline, kerosene, and motor lubricating oils, 1962.....	16348
Optical illusion, elevator, observation during subgravity preceded by negative accelerations.....	16791
<i>see also</i> Distortion.	
Optical measurements:	
equations for determining lunar vehicle position in earth-moon space from simultaneous on-board optical navigation.....	5596
measurements of position of vehicles in earth-moon space.....	12878
Optical properties of satellite materials, theory of optical and infrared properties of metals.....	9149, 19905
Optical spectra, <i>see</i> Spectra.	
Optics:	
electron optical studies of low-pressure gases.....	16420
ion-thruster, numerical evaluation.....	11042
millimeter waves and radioastronomy, USSR study.....	2520

	Entry
Optics—Continued	
precision measurements and calibration standards, selected papers, errata.....	9201
unscrewing of images for optimum visual information, French study.....	1063
<i>see also</i> Light.—Optical measurements.	
Optimal control in linear systems with time lags, USSR.....	14224
Optimal processes:	
control, probability problem, USSR study.....	668
logical net mechanization for time-optimal regulation.....	3158
operating conditions of certain automata with programmed control, USSR study.....	10708
successive approximation methods for solving optimality problems, USSR study.....	6678
theory, existence of absolute minimum in one problem, USSR study.....	16135
O'Quinn, Michael, U.S. marines in Civil War, bibliography.....	16305
Oquirrh Mountains, Middle Canyon, hydrogeology.....	19324
Oral hygiene, <i>see</i> Mouth.	
Orange County, Calif.:	
San Gabriel River to Newport Bay, beach erosion control study, engineer report.....	4869
departmental edition.....	4693
Orange juice, canned, standards for grades.....	7539
Oranges:	
economic feasibility of radiation-pasteurizing.....	19090
Florida, <i>Thielaviopsis basicola</i> associated with declining sweet orange seedlings.....	20270
marketing costs and grower's returns, impact of technological change.....	1706
Orbit-launched nuclear vehicle design and performance evaluation procedure for escape and planetary missions.....	12849, 19908
Orbits:	
analytical representation of Munsen's theory of artificial satellites in terms of orbital true longitude.....	3133
differential correction for Vinti's accurate intermediary orbit.....	1283
earth rendezvous, influence of precession on lunar mission requirements.....	1304
elliptic, eccentric and true anomaly tables.....	11091
error analysis of Scout research vessel.....	11034
geodetic parameters, review.....	12884
launched vehicles, influence of weight parameters on propulsion requirements.....	11020, 18135
low-thrust Mars orbiter mission using Snap-8 analysis of guidance perturbations.....	1278
lunar—	
abort from manned landing and return to rendezvous in 50-mile orbit.....	1306
geometrical characteristics established from earth-moon trajectories.....	11057
orbit descents, analog study.....	5143
rendezvous scheme, parametric investigation.....	11025
returning from moon to specified geographic landing area.....	11088

# INDEX 1963

	Entry		Entry
Orbits—Continued		Oregon—Continued	
periodic, for moon probes.....	5609	census of population, 1960, characteristics.....	11612
rendezvous or rocket-mastodon, USSR study.....	5397	climatological data.....	3517
satellite, computation program for Izsak's 2d-order solution of Vinte's dynamical problem.....	5578	coast, bottom fish survey.....	19228
satellite theory, critical inclination problem.....	7302	coast pilot, supplement.....	6039
von Zepel and modified Hansen methods as applied to artificial satellites compared.....	21005	county business patterns, activities covered by OASDI program.....	15055, 18678
Orchards, land use, problems and conservation treatment, Western States.....	11289	fish hatcheries, mycobacteria in returning salmonid fishes.....	19244
Order of Railway Conductors and Brakemen, emergency board report.....	12082	landings, fish and shellfish—	
Orders, see names of departments, etc., issuing orders—also subjects.		1961.....	541
Ordinance of 1787, text.....	9953	1962.....	19223
Ordman, Arnold:		log production, 1962.....	17504
addresses—		minerals industry, minerals year-book chapter.....	1222, 19851
Aug. 13, 1963.....	16429	pea aphid, ecology in Blue Mountain area.....	18445
Oct. 4, 1963.....	19972	precipitation data, hourly.....	3771
Oct. 11, 1963.....	19973	public school finance program, 1962-63.....	13858
Oct. 31, 1963.....	21037	snow survey measurements, 1910-61.....	1502
nomination, hearing.....	12027	Trask River basin, waterpower resources.....	17531
Ordinance:		water supply outlook and snow survey.....	4289
aluminum hard coating of ordnance materiel.....	9317	women workers, 1960.....	9518
engineering design handbook—		ZIP code directory.....	20061
experimental statistics—		see also Lower Klamath National Wildlife Refuge—Upper Klamath National Wildlife Refuge.	
planning and analysis of comparative experiments.....	7379	Oregon Caves National Monument, general information.....	9244
special topics.....	9315	Oregon Dunes National Seashore, establish, hearings.....	13811
standard techniques for analysis and interpretation of enumerative and classificatory data.....	5664	Ores:	
tables.....	1377	and primary products, Federal Item Identification guides for supply cataloging, supplements.....	3658
surface to air missile series.....	3245-46	deposits—	
explosive disposal, technical manual.....	113	Cachoeira do Campo, Dom Bosco, and Ouro Branco quadrangles, Minas Gerais, Brazil.....	602
pamphlets—		Darwin quadrangle, Inyo County, Calif.....	2347
Naval Weapons Bureau.....	1374, 5660, 7372, 11194-195, 12959-960, 14635.	Deer Flat area, Utah.....	12223
Ordnance Corps (Army).....	1377, 3245-46, 5664, 7379, 9315	hydrochemical methods of prospecting.....	10803
sandwich construction, bibliography for engineers.....	9316	Itabira district, Minas Gerais, Brazil.....	15609
technical terminology.....	12962	Nova Lima and Rio Acima quadrangles, Minas Gerais, Brazil.....	601
see also Atomic ordnance—Fire control (gunnery).		South Silverton mining area, Colorado.....	8337
Ordnance Corps (Army):		grade and tonnage, computer program using statistical and polygonal methods.....	19864
pamphlet ORDP series.....	1377, 3245-46, 5664, 7379, 9315	reserves, computing by triangular method using medium-size digital computer.....	7213
Ordnanceman, see Aviation ordnanceman.		see also names of metals or minerals.	
Ordovician period, graptolites of Basin Ranges in California, etc.....	12224	Organic chemistry:	
ORDP series.....	1377, 3245-46, 5664, 7379, 9315	Armenian Institute of Fine Organic Chemistry, new drugs developed.....	19450
Ore carriers, see Ships.		contributions of C.D. Nenitescu, Rumania.....	2492
Ore ships, see Ships.		Organic compounds:	
Oreanda Sanatorium, in post-war time, USSR study.....	10772	bases, X-ray powder diffraction patterns.....	20941
O'Rear, J. G., new partially fluorinated compounds.....	11158	catalysts, bibliographies.....	1869-71
Oregon:		cyclic intermediates industry, outlook for 1963 and review of 1962.....	5965
and C. & B. Livestock Co., Inc., land exchange between—		nuclear submarine atmospheres, analysis and removal of organic contaminants.....	11162
law.....	18773	organic and non-silicate silicon chemistry, 2d symposium, Dresden, East Germany.....	14399
reports.....	15294		
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics.....	5889		
Cascades natural regeneration of Douglas fir and associated species using modified clear-cutting systems.....	20708		

	Entry		Entry
Organic compounds—Continued		Organophosphorus compounds—Con.	
organophosphorus insecticides, selective toxicity, mechanism problem, USSR.....	16156	chemistry and use, USSR study.....	14335
protection of other organic compounds from effects of radiation.....	9466	combined poisoning with mustard gas, changes in serum cholinesterase, USSR study.....	6765
radiation stability of fluids.....	4493	inhibitors of cholinesterase, chemical structure and biological activity, USSR study.....	10573
radiolysis of organic fluids, annual report.....	15013	physiologically active, synthesis, USSR study.....	16082
synthetic organic chemicals U.S. production, preliminary report.....	4033	Organosilicon compounds, resins, foamed plastics on base of, and combinations with organic polymers.....	18511
Organic coolants essential data, 4th quarterly report, Jan. 1-Mar. 30, 1962.....	5934	Organs, culture, studies of development, function, and disease, symposium.....	9225
Organic matter:		Oriental art, see Art.	
importance in field analysis of soil texture.....	12174	Orientation, orbiting astronomical observatory satellite.....	5604
limnological, analyses by quantitative dichromate oxidation.....	2297	Origins of land-grant colleges and State universities.....	18740
primary production of bodies of water.....	14959	Orlando, Fla.:	
radioactive waste area, accumulation and cycling during early vegetational succession.....	127	consumer expenditures and income, 1960.....	10891
radioluminescence yield.....	1824	Municipal Airport, weather observations, hourly, decennial census.....	14784
Organic plastics, see Plastics.		Orlov, Alexander, testimony.....	333
Organisms:		Ormerod, Louis H., Baker-Nunn satellite tracking station.....	11485
food, effect on fish growth and composition of fishery complexes, USSR study.....	8932	Ornamental plants, see Plants.	
human and animal, influence of pain, USSR study.....	20909	Orogeny, and denudation rates, disparity between.....	15614
human body, radioisotope accumulation and their excretion.....	4469	O'Rourke, Mary E., relief.....	7897
removing radioactive isotopes chemically.....	10476	Orphans:	
water, abiotic and biotic factors significance during acclimatization, USSR study.....	14154	war orphans education program by State approving agencies, provide, hearings.....	12026
Organization and administration series.....	3016	war orphans educational assistance program, approval of courses by State agencies—	
Organization charts:		law.....	20423
Air Force.....	3441	reports.....	20465, 20572
Army Department.....	3764	Orr, Mercedes R., relief.....	15204, 20562
Federal executive departments and agencies.....	8114	Orr, Robert L.:	
Organization for child welfare services.....	11644	occupational wage surveys—	
Organization in industry, mergers and superconcentration, acquisitions of largest industrial and merchandising firms, staff report.....	305	Albuquerque, N. Mex., Apr. 1963.....	14470
Organization manual (Coast Guard).....	4643	Boise, Idaho, May 1963.....	16285
Organization of Congress, Joint Committee on, see Congress, Joint Committee on Organization of		Denver, Colo.....	10897
Organization of Executive Branch of the Government Commissions, objectives, operations and results.....	11906	Los Angeles-Long Beach, Calif.....	14469
Organization projects, see Reclamation of land.		Phoenix, Ariz., Mar. 1963.....	12803
Organizations:		Portland, Oreg.-Wash., May 1963.....	16284
contributions to which are deductible for income tax purposes, list.....	17549	Salt Lake City, Utah.....	9055
European regional economic, selected reading list.....	8379	San Bernardino-Riverside-Ontario, Calif.....	5438
national, for recreation, directory, see also International organizations—nonprofit organizations—also names of organizations.	18221	San Diego, Calif.....	7161
Organometallic compounds, infrared spectra and vibrational assignments.....	7590	San Francisco-Oakland, Calif., Jan. 1963.....	10896
Organophosphorus compounds:		Seattle, Wash.....	3032
anticholinesterase properties of some O-ethyl-S-alkylmethylthiophosphonates.....	20917	Spokane, Wash., May 1963.....	16277
		Orrell, Russell F., stream catalog of southeastern Alaska.....	13976, 20688
		ORRRC, see Outdoor Recreation Resources Review Commission.	
		Orthicons:	
		image assembly for Medical College of Georgia, duty-free entry—	
		law.....	17013
		reports.....	15348, 13549
		Orthopedics, traumatology and prosthetics, USSR (periodical):	
		translations.....	12371, 15781
		Orthopediya, travmatologiya i protezirovaniye, USSR (periodical):	
		translations.....	12371, 15781
		Ortner, Martin H., trimetallic film preparation by electrophoretic deposition.....	9595

# INDEX 1963

	Entry		Entry
Osage River:		Otis, Leon S., animal research in psychopharmacology, central nervous system effects.....	21093
Kaysinger Bluff Reservoir, engineer report—		Otolaryngologists Scientific Society, Kiyevskaia Oblast, report on activity, 1962.....	20883
departmental edition.....	4858	Otolaryngology, auditory test for speech discrimination of monosyllabic words.....	7634
document edition.....	4687	Otoliths, response of otolith organs to tilt.....	7633
Osborn, Ben O., soil conservation at home, tips for city and suburban dwellers.....	5816	Otorhinolaryngology, organs, spectral luminescence of tissues, USSR study.....	12375
Osborn, H. B., field performance of large critical-depth flumes for measuring runoff from semi-arid rangelands.....	9541	OTS, see Technical Services Office.	
Osborn, R. B., transient effects in fast reactor fuels.....	9675	Ottoson, Howard W., land tenure research, 1962.....	15417
Osborne, Robert S., pressure measurements of X-15 at transonic speeds.....	11005	Our American Government.....	9955
Osburn, Max R., controlling insects and diseases of pecan.....	11448	print as Senate document, reports.....	6278, 7930
Oscillations:		Our Capitol, print as Senate document, reports.....	6281, 7935
damped processes applicable to processes in 3d order systems.....	3168	Our flag, print as House document, reports.....	7929, 8081
free, of earth, study.....	7301	Our foreign assistance act, message from the President.....	7868
hinge moment and flutter characteristics of flap type control at transonic speeds, effect of control trailing-edge thickness or aspect ratio.....	14536	Our Lady of Lourdes Memorial Hospital, claim, report.....	11806
large-amplitude, effect on heat transfer.....	5615	Our southern partners, story of Inter-American cooperation.....	1512
longitudinal electron, in thermal plasmas, dispersion and damping factors.....	12867	Our women of the sixties.....	11609
resonant, nonlinear, nonplanar free surface, of fluid in tank.....	11073	Oura Branco quadrangle, Brazil, geology and ore deposits.....	602
Oscillations (electric):		Outboard motors, unnecessary procurement, Army Dept. modernization program, GAO review.....	6533
internal oscillations of 3-dimensional resonators with grate partition, USSR study.....	20842	Outdoor recreation, see Recreation.	
Oscillators:		Outdoor Recreation Bureau:	
audio—		and other agencies, recreation resource specialists, examination announcement.....	13331
Hewlett Packard 200C, test instrument calibration procedure.....	9281	functions and needs (remarks).....	5665
TS-382 A/U through TS-382 F/U, Navy calibration program, technical manual.....	9291	new bureau, general information.....	9320
unit, general radio 1214-M, Navy calibration program technical manual.....	20004	role in promotion of Federal coordination and State governments (remarks).....	1379
Oscilloscopes:		Outdoor Recreation Resources Review Commission:	
AN/USM-105, and plug-in-units, Navy calibration program, technical manual.....	21060	audit report, 1953-62.....	6529
General Electric ST-2A, Navy calibration program technical manual.....	20005	implement recommendations, reports.....	7925, 7946
Hewlett-Packard 130A and 130B, Navy calibration program, technical manual.....	9295	study reports.....	1380, 3248-50, 7382, 16473
Tektronix 535 or 545, test instrument calibration procedure.....	9285		
TS-O, technical manual.....	11150	Outer space:	
Osmionic demineralizers, process, practicality determination.....	14057	acceleration hodograph and its application to space trajectory analysis, research study.....	19899
Osseous tissue, see Bones.		activities of Federal depts., etc., investigation authorization, report.....	6235
Ostracoda, see Crustaceans.		aeronautics and space bibliography—	
Ostrow, S. M., handbook for CRPL ionospheric predictions based on numerical methods of mapping.....	3172	for adults.....	19886
Oswego, N.Y.:		for elementary grades.....	19884
electric facilities of area, map.....	516	for secondary grades.....	19885
harbor improvements, engineer report—		aerospace—	
departmental edition.....	416	aerospace age language, glossary.....	13208
document edition.....	233	bibliography, 1962.....	48
Otero County, Colo., water in Dakota and Purgatoire formations.....	17532	career and scholarship information.....	4824
Otis, James H., Jr., annular jet configuration in ground proximity, low-speed wind-tunnel investigation.....	9186	companies, backlog of orders, current industrial reports.....	11617
		disturbances research program, agreement with New Zealand.....	14730
		education series.....	8186
		periodicals for teachers and pupils, science services, list.....	13864
		nuclear safety (remarks).....	18602
		aerospace safety (periodical).....	3422
		America in space, first 5 years, pictorial review.....	19001
		America's manned flight program, general information.....	12844



Entry		Entry	
Outer space—Continued		Outer space—Continued	
astronauts, qualifications for, committee print.....	2061	man in space flight, USSR study....	17615
atmosphere as part of space environment.....	3125	manned space flight program, status, 1963.....	12842
code of Federal regulations.....	12115	mechanics, Fortran code for solution of problems by numerical methods.....	3130
communications, organization, networks, etc.....	5611	medicine and biology, bibliography.....	9084
cooperation, agreement with Italy.....	1541	micrometeoroids, Explorer XVI presentation of space enigma.....	9142
cosmic mineralogy, new branch of science.....	18177	missions for nuclear rockets (remarks).....	4500
density of atmospheric dust in altitude range 50,000 to 90,000 ft.....	1496	NASA manned space flight team, qualifications and training program.....	12845
earth-moon space, trajectories with symmetrical free return properties, lunar flight study series.....	12883	NASA operations, semiannual report—	
effecting economies in national program, ways and means, report.....	6201	departmental edition.....	7300
elastomeric materials used in aerospace systems, design data handbook.....	4391	document edition.....	6091
environmental research, laboratory techniques.....	5552	National Conference on Peaceful Uses of Space, proceedings.....	3112
environmental testing in exploration of space, satellite reliability.....	16395	national program, effecting economies, hearing.....	304
events of 1962, satellites, space probes, and manned space flights.....	13669	neutrons in space.....	5608
exploration, challenge of the future (remarks).....	12888	nuclear energy for space propulsion, hearings, index.....	4665
explorations, etc.—		nuclear power applications, hearings.....	1970
documents on international aspects and use, 1954-62, staff report.....	9060	peaceful uses, report of Geneva conference.....	6204
print as Senate document, report.....	9086	photostress and flash blindness in aerospace operations.....	18507
gas dynamics.....	5551	plasma—	
geophysics and astronomy, papers.....	5541	interplanetary, observed phenomena, experiments, etc.....	19919
lunar and planetary sciences, papers.....	5542	physics and magnetohydrodynamics, papers.....	7235
man-in-space program, Project Mercury.....	19902	power transistor cooling in space environment.....	16374
Mariner II reports.....	10981	precision endless-loop magnetic tape recorder, description.....	5579
meteoroid effects.....	20983	quality program provisions for space system contractors.....	1264
mission of man in space.....	14536A	radiation effects on solar-cell power systems, handbook.....	18130
NASA and universities (addresses).....	5535	radiation hazards, protection, symposium, proceedings.....	9087
PACAF basic bibliographies.....	11510	refraction effect on setting sun, theory and observation.....	12862
science and technology, NASA-university conference, proceedings.....	3113-14	research—	
extra-terrestrial life—		East European journals, abstracts.....	7304
probabilities, USSR study.....	17968	922, 1069, 2046, 2728, 2876, 2928, 5384, 5420, 6714, 6880, 8523, 8586, 8688, 8779, 8884, 10429, 10534, 10606, 10713, 10793, 12305, 12669, 12687, 14110, 14320, 14412, 15745, 15884, 16129, 16204, 16220, 17780, 17857, 17914, 17990, 19613, 19648, 19700, 19700, 20873, 20888.	
search.....	18124	Investigation authorization, report.....	6114
federal association of German aerospace industry, proceedings.....	7107	Soviet bloc.....	4200
flight applications, exploratory study of thermo-electrostatic power generation, errata.....	7242	research contracts, ownership of inventions, report.....	2050
goals, scientists' testimony, hearings.....	15372	scientific and technical aerospace reports, cumulative indexes.....	11086
Goddard Space Flight Center contributions to COSPAR meeting, May 1962.....	12855	simulated environment, human reactions, USSR study.....	14355
Government publications, price list.....	14652	space environment, effects on plastics, summary with bibliography.....	348
international cooperation, present and future.....	9645	space flights, medical and biological aspects, USSR studies.....	761
international tracking of space vehicles, 5th anniversary, program.....	5507	space materials, parts, components, services inspection system provisions for suppliers.....	1265
interplanetary lunar and near planet environments and methods of simulation, investigation.....	4392	space needle, U.S. project, USSR protests.....	19444
lasers for aerospace weaponry.....	5852	space posture—	
law and power, problems.....	18537	hearings.....	8011
life, problems of adjustment, etc., USSR study.....	15802	report.....	13671

# INDEX 1963

Entry	
Outer space—Continued	
space satellite communications system—	
experiments, report.....	286
ownership and control hearings, print additional copies, report.....	8079, 11864
spacecraft materials for space operations, papers.....	7236
structural fabric program, manufacturing AIRMAT.....	16768
structural research problems for support of future space missions.....	18164
tactical decision-making in aerospace surveillance.....	11507
3d international symposium on investigation of cosmic space, USSR report.....	2570
travel—	
present and future, USSR studies—sensory deprivation, pain and personality relationships, study.....	17834
Soviet development.....	18166
United States space activities, 1962.....	722
USSR interplanetary rocket to Mars.....	4719, 7304
USSR voyage of Vostok-3, cosmonaut's account.....	1047
weapons, defense against, USSR translation.....	20761
weather in space.....	19696
weather phenomena, observations, report.....	19947
world in space.....	287
Outlet Stores, Inc., relief.....	9141
Outlying possessions:	
special duty exemption, reports.....	7887
United States trade.....	11832, 13544, 13584
Outpatient services, <i>see</i> Clinics.	3737
Output index based on production cost norms, USSR.....	19538
Output meters, TS-585A/U, TS-585B/U, TS-585C/U, or TS-585D/U, Navy calibration program, technical manual.....	16466
Overruns, southern pine logs.....	6523
Oversea service:	
Air Force engineers, pamphlet.....	5868
Federal jobs.....	4627
Overseas business reports.....	2383-2400,
5061-90, 6586-6621, 8378-8420, 10330-344, 12253-257, 15647-652, 17554-561, 19355-358, 20756-757.....	5647-652, 17554-561, 19355-358, 20756-757
checklist.....	8422
Oversnow transport.....	9138
Overtime, <i>see</i> Hours of labor.	
Ovomucoid, <i>see</i> Glycoproteins.	
Owen, William E., economic developments in Chile, 1962.....	8408
Owenke Tribe, primitive society of Inner Mongolia, Communist China study.....	2650
Owens, Charles D., scale for weighing beehives.....	5792
Owens, James M., address, Sept. 13, 1963.....	18631
Owsiak, Jan, <i>see</i> Koss, Jan.	
Oxford, Conn., four-town redevelopment area, ARA case book.....	20317
Oxidation:	
biological, in microbiology, USSR study.....	16209
coal mine pyrites.....	14512
Colorado oil shale.....	5492
columbium-hafnium binary alloys—copper, and irradiation effects, study.....	1240
gaseous hydrocarbon, adaptation of saprophytic microflora, USSR study.....	14964
hydrocarbons, catalytic activity.....	17701
hydrocarbons, catalytic activity.....	3051

Entry	
Oxidation—Continued	
leaching of copper sulfides in acidic pulps.....	7224
molybdenum-silicon system, kinetics.....	7589
nickel, and creep-rupture strength, products of oleic acid, radiomimetic effect, protective action of radioprotectors, USSR study.....	11163
quantitative dichromate, limnological organic analyses.....	16151
reduction products in liquid state, development of krypton-85 clathrate analytical techniques for measuring.....	2297
sulphuric acid from sulphur dioxide by autoxidation in mechanical cells.....	18594
titanium at low temperatures, USSR study.....	12835
uranium dioxide, USSR study.....	6888
vapor phase, of hydrocarbons in low-temperature coal tar.....	5285
Oxides:	
metal, compilation of melting points.....	10955
oxides of 65 elements, thermodynamic properties.....	19951
rare earth, acute mammalian toxicity.....	16318
sinterable powders and ceramics made from them, investigation.....	18502
sintering by electrical conductivity method, USSR study.....	9639
<i>see also</i> oxides by name, e.g. Ferrous oxide.	8709
Oxidizing agents:	
decane oxidizing bacteria isolated from depth waters of northern Cascaucasus, USSR study.....	17700
hydrocarbon-oxidizing bacteria research, East Germany study.....	8459
Oxygen:	
administration of carbon dioxide with oxygen at 39,000 feet altitude, effects on brain oxygenation, etc.....	69
atmospheres rich in, effect on cerebral lipid peroxides.....	9106
atom recombination at oxide surfaces and effect of Tesla discharge on recombination heat transfer.....	3151
choking 2-phase flow literature summary and idealized design solutions.....	18191
compounds—	
microhydrogenation identifying technique.....	1236
polar material in distillate fuel, separation, etc.....	19869
consumption, effect of decreased barometric pressure.....	4411
consumption of mice at various environmental temperatures, effect of hypoxia on rate.....	14917
content of expired air, electro-metric determining, USSR study.....	19446
detection, use of thermochemical gas analyzer.....	18521
determination, platinum-tube method for fluorine-containing compounds.....	18706
diffusion in zirconium dioxide.....	14978
effect on mechanical properties of tungsten.....	9155
gasification of bituminous coal with oxygen in pilot plant equipped for slurry feeding.....	1251
high partial pressure, gas exchange dynamics in exposed white mice, USSR study.....	17733

# JANUARY-DECEMBER

	Entry
Oxygen—Continued	
hydrogen-helium mixtures, combustion tests at loading pressures up to 8,000 pounds per square inch	19918
injection processes for 15-percent fluorine-85-percent oxygen and heptane in 200 pound-thrust rocket engine	5524
liquid, boundary lubrication characteristics of bearing steel in liquid oxygen	5589
liquid propellant, injector principles in 2400-pound-thrust rocket engine, evaluation	10987
relationships in streams, proceedings of seminar, 1957	16519
Schumann-Runge ultraviolet absorption continuum, effect of high temperature	1321
sensing, physical transducers	18499
toxicity, pathological physiology	18162
Oxygen deficiency:	
chronic exposure to hypoxia, effect on blood pressure and thyroid function of hypertensive rats	9629
moderate hypoxia, modified tissular resistance accompanying acclimatization, USSR study	17691
Oxygen masks, crew and passenger, determining efficiency	5955
Oxygenators, pump, profound hypothermia induced and reverted	11497
Oysters:	
certified shippers	3506
Pacific oyster meats, individually frozen, storage life	17448
Ozark National Rivers:	
establish as part of National Park System—	
hearings	13812, 20500
report	19035
Ozark National Rivers Commission:	
establish—	
hearings	13812, 20500
report	19035
Ozark region, Missouri highlands, sealing farm ponds	14833
Ozark Rivers National Monument:	
proposal	3188
supplement	3185
Ozone, exposure, mitotic inhibition induced in grasshopper neuroblasts	16799
<b>P</b>	
P. and S. docket	3999
P.H.S., see Public Health Service.	
P.P.C. series	4000
P.R.L., see Personnel Research Laboratory.	
PA series	39,
4367-71, 5836-39, 7580-81, 9586,	
13185-186, 14882-887, 16752-	
755, 18439-442.	
PACAF basic bibliographies	62,
5880-81, 9621, 11510-511, 13212,	
14916, 18491-492.	
Pacific area:	
climatological data	3517
PACAF basic bibliographies	62,
5880-81, 9621, 11510-511, 13212,	
14916, 18491-492.	
trade patterns, hearings	329, 19048
United States Army in World War II	9107, 12820
United States policy	20319
Pacific Coast:	
Alaska, coast pilot, Dixon Entrance to Cape Spencer, supplement	6039
albacore tuna, seasonal movement, 1962 review	17449
coast pilot, supplement	6038

	Entry
Pacific Coast—Continued	
light list	4642
North America and Asia, tidal current tables	18742
transportation lines	6377
waterborne commerce, 1962	19150
zooplankton volumes, 1959	19241
Pacific Islands:	
light list	4642
mineral industry, minerals year-book chapter	19852
north and south, lights and fog signals, list change	5652
sailing directions, change	21050
ZIP code directory	20035
Pacific Islands Trust Territory, see Trust Territory of Pacific Islands.	
Pacific Marine Fisheries Commission, compact, amendment, hearings	4757
Pacific Northwest, see Northwest (U.S.).	
Pacific Northwest Forest and Range Experiment Station:	
annual report, 1962	12151
forest survey reports	2311
research notes	6491,
8297-98, 10222	
research papers	6492-93, 10223
silvical series	12160
Pacific Ocean:	
airman's guide	3447
central and western, tide tables	15119
danger areas, DAFAC	21051
eastern, marine game fishing, atlas	19227
eastern tropical—	
physical, chemical, and biological observations	2299
sea surface temperature monthly averages and anomaly charts, 1947-58	10202
fishing industry plenums, USSR research	10658
flight information manual, supplement	483
flight information publication—	
enroute Pacific and southeast Asia	3695
planning, air traffic control procedures	3703
planning, planning data	3698
terminal high altitude	3708
terminal low altitude	3710
halibut fishery, economic aspects	10190
North, high seas fisheries convention, amendments	16607
northeastern, spiny dogfish, control, etc	19242
northern, sailfish and Portuguese men-of-war, distribution of ecological forms, USSR study	5311
notice to mariners	3973
radio navigational aids—	
1962, change	7355
1963	18216
South Sea archipelagoes, Communist China study	8783
western, lights and fog signals, list	19989
Pacific Southwest Forest and Range Experiment Station:	
forest research notes	10226-229,
12162-163, 15557	
miscellaneous papers	2312-13,
6494-96, 10224-225, 12161	
report, 1962	15550
research notes	6497-99
technical papers	2314-15,
6500-3, 8299, 12164, 15558	
Pacific States:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	5989

# INDEX 1963

Entry	Entry
Pacific States—Continued	Packing industry—Continued
census of housing, 1960, standard metropolitan statistical areas, tenure rooms, condition and plumbing, etc. 1918	P. and S. docket 8999
county business patterns, activities covered by OASDI program 15055	packers and stockyards act—
errata 18678	amend—
fisheries, annual summary, 1961 8265	hearing 11871
west coast maritime strike impact, report 18956	law 13435
Pacifica Foundation:	reports 9897, 13717
investigation, hearings 15396	as it applies to—
print additional copies, report 15345	auction markets 13140
Package power reactors, <i>see</i> Reactors (atomic).	livestock dealers 13141
Packages:	livestock producers 13142
gift, sending to—	packers subject to provisions, list 14827
Berlin 2408	recordkeeping for livestock dealers 16754
Bolivia 2401	regulation of livestock auction markets under, hearings 9918
Cameroon 2402	stockyards posted, list 14828
Canada 2403	what it is, how it operates 18441
Congo (Leopoldville) 2404	packers and stockyards resumé 18386
Costa Rica 2405	plastics for construction of meat handling equipment 13159
Federation of Rhodesia and Nyasaland 2406	Tennessee's small meatpackers, problems 1482
France 2407	Pads, <i>see</i> Typewriter pads.
Germany 2408	Page, Harry G., water regimen of inner valley of San Pedro River, Mammoth, Ariz. 15620
Greece 2409	Pails, steel shipping, current industrial reports 3574, 11629
Mexico 2410	Pain:
New Zealand 2411	influence on human and animal organism, USSR study 20909
Norway 2412	sensory deprivation and personality relationships for space travel, study 18166
Paraguay 2413	Paine, R. M., intermetallic compounds for very high temperature applications 9670
Sierra Leone 2414	Paint:
Sweden 2415	antifouling—
Switzerland 2416	destruction of film-founding base by marine microorganisms, USSR study 17739
United Arab Republic (Egypt) 2417	poisons in, USSR studies 17675
Packaging:	artists' oil paints, standard of trade 9703
box and crate construction and packaging data, publications, list 12154	current industrial reports 3574, 9718
converted flexible products, current industrial reports 15062	effect of insect repellents 1623
early potatoes, Alabama and Florida, repackaging at production points 4358	Federal item identification guides for supply cataloging, supplement 3657
industry reports 3552	Federal test method standard 8263
McIntosh apples, some effects on quality, in New York City 4334	Painted Rock Reservoir:
materials, Federal test method standard 13943	Gila River flood control, engineer report—
prepackaged vacuum-cooled cauliflower, effects of chemical treatment on quality 13148	departmental edition 412
prohibit unfair and deceptive methods, hearings 12025	document edition 313
requirements code, military standard 2117	Painting, building maintenance, standards at Naval establishment facilities, handbook 9517
steel products, recommendation of trade, amendments 4557, 13267	Paintings:
<i>see also</i> Packing.	Daniels in India, catalog 8327
Packers, packers and stockyards act, list of packers subject to provisions of 14827	Isleta paintings—
<i>see also</i> Packing industry.	departmental edition 93
Packers and stockyards resumé 18386	document edition 220
Packing:	Shen Chou art, 1427-1509, study 583
converted flexible packaging products, current industrial reports 3574	Paints, <i>see</i> Paint.
levels, Federal standard 6445	Pair production, large angle 125
materials, Federal test method standard 13943	Pakistan:
packaging and packing supplies, Federal item identification guides for supply cataloging 3654	accessions list, Library of Congress American Libraries Book Procurement Centers, Karachi and Dacca 7186
packaging requirements code 17350	agricultural commodities, agreements 5738, 20183
<i>see also</i> Packaging— <i>also</i> names of articles packed.	economic developments, 1962 8390
Packing industry:	establishing business 2418
air screens for insect control 13158	exports and imports, licensing and exchange controls 2387
facilities and equipment fact sheet (series) 13158-159	friendship and commerce treaty—report 20546
livestock purchased, etc., by packers, 1957-61 9532	text, protocol, etc. 20520
	loan of vessel, agreements 9425, 16610

# JANUARY-DECEMBER

Entry	Entry
Palacios, Tex.:	Panama Canal review (periodical)--- 4003
Gulf Intracoastal Waterway-channel improvement, engineer report--- departmental edition----- 417	Panama Canal Zone, <i>see</i> Canal Zone-- Canal Zone Government.
document edition----- 242	Panama hats, <i>see</i> Hats.
Palatine, Ill., population, special census----- 166	Panek, Louis A.:
Paleomagnetism, <i>see</i> Terrestrial magnetism.	bolting bedded mine roof--- friction and suspension, combined effects----- 1254
Paleontology, <i>see</i> Fossils.	suspension, effect----- 1253
Paleozoic era:	Panel of Consultants on Vocational Education:
rocks of Antelope Valley, Eureka and Nye Counties, Nev----- 10291	education for changing world of work--- reports----- 10066, 13844-846
sandstones and shales from borings in Florida, petrography----- 15613	summary report----- 2156
Palestine, Arab refugees from Palestine, report----- 7957	Panel on High Energy Accelerator Physics, report, Apr. 26, 1963. 15016
Pallik, E. D., far infrared bibliography----- 12948	Panel on Science and Technology:
Pallas, James E., Jr., research in plant transpiration, 1961----- 9587	4th meeting, report----- 2060
Pallas (asteroid):	5th meeting--- proceedings----- 6206
rectangular coordinates, 1960-80--- 7344	report----- 8010
Pallets (materials handling):	Panels (aircraft):
Air Force, resupply, tests----- 5861	flat single-bay, effects of therm stress and buckling on flutter characteristics----- 1290
wood, market in auto industry, case study of Ford Motor Co. wooden, advantages with use of aldry deckboards----- 17476	flutter--- application of transtability concept and experimental results--- titanium skin, flat and curved, at supersonic speeds----- 5595
Palm Beach County, Fla., truck crop production practices----- 2126	orthotropic, flat rectangular, flutter characteristics----- 19924
Palm Springs, Calif., geology and hydrology of Agua Caliente Spring----- 8346	sandwich-type flat, flutter tests--- simply supported rectangular, post-buckling effects on flutter--- stiffened, room temperature shear and compression tests with integral or attached cooling circuits----- 9148
Palm trees, <i>see</i> Palms.	Panels (building):
Palmer, Allison R., Glyptagnostus and associated trilobites in United States----- 606	wood brick strip paneling, new way to decorate----- 17477
Palmer, C. Mervin, algae and water supplies in São Paulo area, Brazil----- 16528	Pang Yong Chin, <i>see</i> Pong Yong Jin.
Palmer, Robert S., apparatus for forming waterdrop----- 1719	Pankratz, Louis B.:
Palms, trees in U.S., general information----- 18418	high temperature heat contents and entropies of sesquioxides of--- erbium, etc----- 5501
Palmyra, N.J., bridge construction across Delaware River, use of funds, hearing----- 300	lutetium, dysprosium, and cerium----- 14513
Palo Verde Mesa, desert lands, extend time for final proof of development, report----- 13574	high-temperature heat content and entropy data for vanadium silicide----- 12837
Pamphlets, copyrighted, catalog of copyright entries----- 338, 12031	low-temperature heat capacity and high-temperature heat content of mullite----- 19860
<i>see also</i> names of departments, etc., issuing pamphlets--- <i>also</i> subject involved.	thermodynamic data for gallium and scandium sesquioxides--- 9127
Panama:	Panning, I. J., survey and analysis of specialized science information services in United States, final report----- 9683
alliance for progress programs, report on study mission----- 8023	Papago Indians, water supply of Indian reservations (series)----- 6567
print as S. Doc., report----- 20571	Papago Tribe, <i>see</i> Papago Indians.
Army mission, agreement----- 5737	Papell, S. Stephen, subcooled boiling heat transfer under forced convection----- 9156
atomic energy, cooperation for civil uses, agreement----- 16592	Paper:
foreign trade regulations----- 20756	bond and writing, white and colored, Federal standard----- 535
gas appliances, household and commercial, U.S. market----- 18624	current industrial reports----- 3574, 4579, 4584, 18684
study mission report----- 9863	duplicating, copy, liquid process, Federal standard----- 536
Panama Canal:	Government specification standards----- 6210, 11916, 15339
appropriations, 1964, hearings--- construction annuity act, report, 1962----- 9760	Industry---
ship pilots, annuities, hearing--- textual records, preliminary inventories----- 9200	outlook for 1963 and review of 1962----- 1859
<i>see also</i> Canal Zone.	technological change and automation--- departmental edition----- 1177
Panama Canal Co.:	document edition----- 282
activities, amend Canal Zone code--- hearings----- 9944	Industry report----- 4121
report----- 11824	
annual report, 1962----- 11603	
departmental edition----- 11765	
document edition----- 11757	
audit report, 1962----- 587	
financial statements, GAO report---	



# INDEX 1963

	Entry		Entry
Paper—Continued		Paraguay—Continued	
manifold, Federal standard.....	6444	gas appliances, household and com-	
newsprint, world supply-demand,		mercial, U.S. market.....	18621
outlook through 1965, report.....	20479	sending gift packages to.....	2413
production, fulfillment of plans of		trade agreements.....	1561, 13082, 21124
scientific research work, etc.,		Paralyzed Veterans of America, legis-	
USSR study.....	6659	lative objectives, 1963, hear-	
supply-demand, report.....	17113	ings.....	8014
tear resistance, effect of number of		Paramagnetic resonance, <i>see</i> Magnetic	
plies.....	15561	resonance.	
tensile properties, electrical strain		Paramagnetism, <i>see</i> Magnetism.	
gage for testing.....	12169	Parameters:	
Paper, <i>see also</i> Blotting paper—Cal-		aerodynamic, from nonlinear	
culating machine paper—		theory, used in modified-strip-	
Mimograph paper— <i>also</i> names		analysis flutter calculations	
of articles manufactured from		for finite-span wings.....	14566
paper.		atmospheric, determination by use	
Paper birch, <i>see</i> Birch.		of rocket-borne mass spectrom-	
Paper clips, Federal standard.....	20680	eters.....	18123
Paper mills:		correlation, use to improve esti-	
automation, impact, 1947-60.....	1185	mates of mean and variance of	
industry wage survey—		streamflow.....	5023
departmental edition.....	1170	geodetic, review.....	12884
document edition.....	275	hypersonic flow, for helium as	
opportunities for development in		real gas.....	9164
western Colorado.....	4092	insertion conditions for lunar mis-	
Paper pulp, <i>see</i> Pulp.		sions including trajectory con-	
Paper weights, <i>see</i> Paperweights.		siderations.....	19944
Paper work, <i>see</i> Paperwork (office		nonstationary, automatic control,	
practice).		USSR study.....	6778
Paperboard:		reactor measurements in subcritical	
current industrial reports.....	3574,	and critical assemblies.....	11562
4579, 4584, 18684		weight, influence on propulsion re-	
Industry outlook for 1963 and re-		quirements of orbit-launched	
view of 1962.....	1859	vehicles.....	11020
Industry report.....	4121	errata.....	18135
supply-demand, report.....	17113	Paraplegics, housing program, ex-	
<i>see also</i> Pulpboard.		pand, report.....	6149
Paperboard mills:		Parasites:	
industry wage survey—		animal, etiology and epidemiology,	
departmental edition.....	1170	Rumanian study.....	19426
document edition.....	275	cowbirds, host relations.....	12915
Papers, <i>see</i> Records.		internal, of swine.....	5818
Paperweights, glass, Federal stand-		OTS bibliography.....	18629
ard.....	19214	Parasitology, OTS bibliography.....	18629
Paperwork (office practice):		Paratyphoid, fluorescent antibodies	
forms management, Navy Depart-		method for accelerated diagnos-	
ment guide.....	20010	is, USSR study.....	12492
management survey, President's		Parawings, <i>see</i> Wings (aircraft).	
Committee on Equal Employ-		Parcel post, agreement with Thailand.	1556
ment Opportunity.....	18271	<i>see also</i> Postage.	
Papillion Creek:		Parents:	
engineer report—		deceased veterans, increased pay-	
departmental edition.....	444	ments—	
document edition.....	234	law.....	11713
Papio dougiera, <i>see</i> Baboons.		reports.....	6144, 9974
Parachutes:		low income, helping through parent	
Army troop reserve parachute, bal-		education groups and home-	
listically deployed pilot chute,		making consultants.....	15090
descent times and impact locations		Parin, Vasily V., biographic informa-	
for high altitude balloon pay-		tion.....	17952
loads.....	18455	Parity, <i>see</i> Prices.	
joint test facility, USAF 6511th		Park, J. K., combine cutting and feed-	
test group and US naval, El		ing mechanisms in Southeast.....	4374
Centro, Calif., description.....	12036	Park, John J., metallic reactions in	
nonemergency jumping, Federal		uranium recovery.....	4484
aviation regulations.....	479	Park police, <i>see</i> Police.	
67-ft. D. recovery parachute, evalu-		Parke, Robert, Jr., Interim revised	
ation.....	5860	projections of number of house-	
Parade, magazine article entitled,		holds and families, 1965-80....	7762
Congressmen who cheat, hear-		Parker, James W.:	
ing.....	7998	adjustment to submergence aboard	
Paraffins and other blocking agents		submarine.....	7199
that interfere with petroleum		follow-up study of submarine school	
production, bibliography.....	7207	graduates.....	9103
Paragliders, <i>see</i> Gliders (aircraft).		Parker, John G.:	
Paraguay:		rare-earth minerals and metals....	18092
agricultural commodities, agree-		thorium.....	18110
ment.....	9419	uranium.....	18112
air transport capability of air force,		Parker, John M., 3d, geologic setting	
assistance to increase, agree-		of Hamme tungsten district,	
ment.....	1543	N.C. and Va.....	15602
economic, technical, and related as-			
sistance, agreement.....	3346		

Entry	Entry
Parker Dam and power plant, general information-----	5707
Parker-Davis project : general information-----	5705
Parker Dam and power plant, general information-----	5707
Parking areas, nonorganizational vehicles, engineering and design manual-----	10087
Parking of vehicles, District of Columbia, public offstreet facility, report-----	13736
Parks, National Capital, tour information-----	19979
<i>see also</i> National parks— <i>also</i> names of parks.	
Parks Air Force Base, fraudulent Government checks issued, relief of persons harmed as result of negotiation-----	11769
Parliamentary conferences, <i>see</i> Interparliamentary Union—Mexico-United States Interparliamentary Group.	
Parliamentary practice, Cannon's procedure in House of Representatives-----	9829
Parody, Ovid F., need for comprehensive educational planning-----	378
Parole Board, D.C., discharge parolees from parole supervision, grant discretionary authority, report-----	18896
Parolees, discharge from supervision, grant Parole Board discretionary authority, report-----	18896
Parosena Thermoelectric Power Plant, Rumania, achievement-----	18001
Parotid : fluid— corticosteroids in, following oral hydrocortisone dosage-----	9631
steroid responses to graded doses of corticotropin-----	14922
saliva, lipid constituents-----	81
Parratt, Lloyd, and family, relief-----	13504
Parrett, Mary I., congressional guide to information services, Department of Agriculture-----	2367
Parrino, Paul S., civil defense emergency hospital, plans and training for maximum utility-----	21080
Parrish, Frank, Jr., effects of water injection on oil recovery in Cooke and Grayson Counties, Tex-----	9135
Parsons, Edward W., rock bolt anchored by explosive forming-----	14515
Parsons, Elsie Clews, Isleta paintings, with introduction and commentary-----	93
Parsons, Mabel H., multidisciplinary team in Iowa research project uses home economist in service to families with mental retardation-----	9732
Particle accelerators, magnet systems designs, for particle beam-----	5942
<i>see also</i> Accelerators.	
Particle board, <i>see</i> Pulpboard.	
Particleboards, <i>see</i> Pulpboard.	
Particles : charged, heavy cosmic rays and nuclear processes within large silver chloride crystals, delineation of tracks-----	7255
ejection from sun, possible mechanism, USSR study-----	2469
elementary, theory, 4th All-Union conference-----	20810
energetic, inner Van Allen belt-----	16373
high-velocity, catastrophic fracture of impacted liquid-filled tanks-----	12848
oxidizer, effect of size on additive agglomeration-----	1280
Particles—Continued	
propagation of polydispersed admixture, influence of turbulent scattering along vertical and in direction of wind-----	1018
substrate bonding of plasma-sprayed materials, preliminary investigation-----	18136
theory of weak interactions (13 lectures)-----	1820
vertical migration in front of moving freezing plane-----	4842
<i>see also</i> Alpha particles—Magnets.	
Partitions, movable, use in buildings, engineering manual-----	2211
Partnerships : income tax returns, statistics, 1960-61-----	2376
partnership, people and government (address)-----	1710
Partridge, James A., thermoluminescent spectra of sodium chloride and hydroxide-free sodium chloride irradiated with 40-Mev alpha particles-----	9167
Parts, <i>see</i> Repair parts.	
Pascagoula, Missa : harbor, engineer report— departmental edition-----	2213
document edition-----	1995
Pascagoula River : flood control, engineer report— departmental edition-----	2186
document edition-----	1992
Pasini, J., III, paraffins and other blocking agents that interfere with petroleum production, bibliography-----	7207
Pasour, E. C., Jr., farm prices of apples for canning and freezing-----	12041
Passaic, N.J. : occupational wage survey— departmental edition-----	16287
document edition-----	15178
Passamaquoddy-St. John River project, challenge and opportunity for New England (remarks)-----	19347
Passamaquoddy tidal power project : report by study committee-----	15633
summary-----	15634
Passenger cars, <i>see</i> Automobiles.	
Passenger rates : transportation act of 1963, hearings-----	15319
transportation acts amendments, 1962, hearings-----	2054
Passenger traffic, United States and foreign countries-----	4140, 14046
<i>see also</i> Railroads.	
Passenger trains, <i>see</i> Railroads.	
Passengers, travel between U.S. and foreign countries-----	4140, 14046
Passmore, E. M., diffusion barriers for refractory metals-----	13195
Passports : application requirements, care, etc-----	18325
information for applicants-----	14708
not required of U.S. citizens, list of areas and general information-----	14712
summary of statistics-----	7437
United States, visa charges of foreign countries, list-----	9397
visa procedures of State Department— hearings-----	2101
report-----	335
visas— agreement with— Ecuador-----	16579
Spain-----	20186
United Arab Republic-----	20184
issuance of re-entry visas to diplomatic personnel, agreement with Czechoslovakia-----	9416

# INDEX 1963

	Entry
Passports—Continued	
visas—continued	
nonimmigrant, waiver of finger-	
printing requirements, agree-	
ment with Cyprus.....	9423
waiver of fees for performing ar-	
tists and groups agreement	
with Poland.....	9429
Pasternak, Mildred, marketing serv-	
ice programs.....	1615
Pasteurization:	
radiation, of foods, summaries of	
accomplishment, 2d annual	
contractors meeting, 1962....	15009
radiation processes—	
application to Pacific crab and	
flounder, annual report.....	18595
economic feasibility for fresh	
strawberries, peaches, toma-	
toes, grapes, oranges and	
grapefruit.....	19090
fresh fish and fruits (remarks).....	18610
shrimp, radiation treatment.....	11568
Pasture crops, see Forage plants.	
Pasture lands:	
dairy, 1962 season, summary.....	1563
trefoil production for pasture and	
hay.....	5819
Patashnik, Max, accuracy of net-	
weight determinations for frozen	
glazed halibut steaks.....	4947
Patent aid, examination announce-	
ment.....	1950
Patent examiners, manual of proce-	
dure, changes.....	16479
Patent Office:	
administration, investigation—	
authorization, report.....	6259
report.....	8058
attorneys and agents registered to	
practice before, list.....	14640, 20019
attorneys roster, quality typog-	
raphy from computer data using	
magnetic tape storage and	
computer processing for photo-	
composition input.....	16480
classification bulletins.....	1381-82,
7383, 14638, 16475-477, 20017	
decisions—	
departmental edition.....	7384
document edition.....	6082
official gazette.....	3983
patent aid recruiting program (ad-	
dress).....	1383
press releases.....	4081
progress, an accounting (address).....	16474
reorganization, major objectives	
(address).....	3251
report, 1962.....	9321
report, 1963.....	21066
research and development pro-	
gram.....	13817
trademark rules of practice with	
forms and statutes.....	14641
trademarks, index.....	7385
Patent Office Scientific Library, pe-	
riodicals.....	5669
Patent Office Workshop on Informa-	
tion Retrieval, International,	
see International Patent Of-	
fice Workshop on Information	
Retrieval.	
Patents:	
American system, celebration in ob-	
servance of 125th anniversary	
of U.S. patent act of 1836, pro-	
ceedings.....	5666-67
buying and selling.....	1444
classification.....	3983
classification manual, replacement	
pages.....	5668, 11200, 16478, 21067

	Entry
Patents—Continued	
code of Federal regulations.....	4922
decisions, weekly.....	3983
decisions, yearly, 1962—	
departmental edition.....	7384
document edition.....	6082
Eastern Utilization Research and	
Development Division, lists.....	5805,
16719	
examining procedure manual,	
changes.....	16479
Government policies—	
economic and legal problems....	15402
economic aspects, hearings.....	12028
ICIREPAT 1963, progress, pitfalls	
and prospects (address).....	20018
in official gazette.....	3983
index, 1962.....	12968
industrial property revolution in	
Common Market and U.S. (ad-	
dress).....	9322
laws, investigation—	
authorization, report.....	6259
report.....	8058
Northern Regional Research Lab-	
oratory—	
chemically modified oil products	
and industrial uses, list.....	5797
publications, 1936-61, list.....	5798
Northern Utilization Research and	
Development Division, lists.....	7553,
9553, 16720	
obtaining information from.....	11201
patent abstract series.....	9782, 13350
index.....	1959
policies impact on small business,	
economic aspects, hearings.....	12028
Pollish, abstracts, translations.....	11601,
15031, 18634, 20340	
practices of—	
Federal Communications Commis-	
sion, preliminary report.....	332
Interior Dept., preliminary re-	
port.....	331
protection of industrial property,	
convention—	
report.....	20545
text.....	20518
publications, price list.....	5682
regulations of Sweden.....	5075
rights interchange, agreement with,	
Sweden.....	1547
Southern Utilization Research and	
Development Division, semian-	
nual lists.....	14845, 20268
Soviet, on acoustical and magnetic	
measuring instruments.....	676
Swiss, translated.....	18635
Western Utilization Research and	
Development Division, semian-	
nual list.....	14844
see also Inventions.	
Paterson, N.J.:	
ARA-MITA program, graduation	
of 500th trainee (remarks)....	18532
occupational wage survey—	
departmental edition.....	16287
document edition.....	15178
Path of flight, practical information	
about navigation of private air-	
craft.....	15470
Pathoanatomical radiation-induced	
changes in lungs.....	9668
Pathogenic mechanisms in gas and fat	
embolism.....	5885
Pathological physiology, see Physiol-	
ogy.	
Pathological physiology and experi-	
mental therapy (USSR periodi-	
cal):	
translations.....	749, 1020, 6802

# JANUARY-DECEMBER

	Entry		Entry
Pathology:		Pavements—Continued	
newborn children, primary prob-		military installations—	
lems, USSR study.....	5261	flexible, design for roads, streets,	
specimens, preparing for storage		etc., engineering manual....	4865
and shipment.....	18557	change.....	19143
Pathways to action, jobs for the		rigid, for airfield, engineering	
handicapped, program guide,		and design manual.....	4863
1963-64.....	18029	Pavldes, Loula, geology and manga-	
Pathways to rural progress.....	472	nese deposits of Maple and	
Patient asks for medical report.....	18312	Hovey Mountains area, Aroost-	
Patients:		took County, Maine.....	6554
Clinical Center, NIH, admission		Pavlov, Todor D., biography.....	14356
procedures.....	11103	Pawleys Island, S.C.:	
hospital, lung cancer, familial ag-		hurricane survey, engineer report—	
gregation.....	12091	departmental edition.....	19146
hospital rooms, lighting need, re-		document edition.....	18811
port of joint project.....	1409	Pawski, Leonard, handling and ship-	
in mental institutions, 1960.....	5625	ping potatoes in bulk to pro-	
9226, 12906.....	16425	cessing plants.....	18432
long-term illness, nursing care...	13109	Pawtucket, R.I.:	
progressive care in hospital, esti-		area redevelopment manpower re-	
mating bed needs.....	7493	port.....	17402
tumor, proper feeding during radia-		occupational wage survey—	
tion treatment.....	20880	departmental edition.....	16281
Patman, Wright, answers to ques-		document edition.....	15172
tions on our American Govern-		Pay, see Salaries—Wages.	
ment.....	9955	Pay, allowances, etc.:	
Patologicheskaya fiziologiya i eksperi-		allotment, class Q, for dependents	
mental'naya terapiya (periodi-		of enlisted members of Army	
cal):.....		in pay grades E-4 corporal	
translations.....	749, 1029, 6892,	specialist 4, E-3 private 1st	
Patriotism, character guidance dis-	12310	class, E-2 private, E-1 re-	
cussion.....	102	cruit.....	5911
Patrusky, Ben, water pollution, rising		increase basic pay of uniformed	
tide of trouble.....	11249	services—	
Pattee, Eldon C., mobile spectroscopic		hearings.....	6189, 15375
laboratory for reconnaissance		law.....	20424
and exploration.....	10946	reports.....	7968, 9893, 18854
Patten, Eugene P., Jr., application of		military, causes of overpayments,	
electrical and radioactive well		Defense Dept., GAO review...	8313
logging to ground-water hy-		military personnel in Alaskan Com-	
drology.....	14028	mand not accompanied by de-	
Patterns:		pendents, unjustified cost-of-	
Communist espionage, report, addi-		living allowances paid, GAO	
tional copies, report.....	11855	report.....	15598
progress in aging, case studies, list-		missing persons, amend act, report...	13536
recognition by correlation method,	2358	Navy and Marine Corps, military	
USSR study.....	5274	personnel serving as military	
Patterson, C. Meade:		inspection representatives in	
calcium and calcium compounds...	16319	Tokyo and Osaka, Japan, Navy	
lime.....	20951	Dept. illegal per diem pay-	
Patterson, D. E., summary of inci-		ments, GAO report.....	20715
dents involving USAEC ship-		per diem for members of Congress	
ments of radioactive materials,		travelling outside U.S., limit,	
1957-61.....	139	reports.....	13527, 13531
Paul, Benson H., application of silvi-		travel or transportation allowances,	
culture in controlling specific		authorize for cancelled, etc.,	
gravity of wood.....	13191	orders, report.....	13539
Paul, Frances, spruce root basketry		see also Mustering-out-payments.	
of Alaska Tlingit.....	15632	Pay rolls:	
Paul, Samuel, small suppliers and		benchmarks for BLS payroll em-	
large buyers.....	1459	ployment statistics, 1959.....	5458
Pauli, Stephen, magnetic core voltage-		Federal agencies, principles and	
to-frequency converter.....	5606	procedures, GAO guidance	
Paulling, John R., trends in forage		manuals.....	585, 19278
crops varieties, 1962.....	8228	Payloads:	
Pavements:		balloon parachute descent times and	
airfields—		impact locations for high alti-	
engineering and design manual,		tude.....	18455
change.....	428-429	variable-drag, ejected from vehicle	
rigid, prestressed, small scale		in low earth orbit, trajectory	
model studies.....	13880	analysis.....	16402
airport paving, manual.....	92	Payments, provisional, by Hazeltine	
Army airfield and heliport, engi-		Corporation under Navy Dept.	
neering and design manual.....	4862	contract, GAO review.....	2330
concrete, standard practice, engi-		Payne, Robert B., effects of acute	
neering and design manual,		radiation exposure on human	
change.....	432	performance.....	5884
design for frost conditions, engi-		Payrolls, see Pay rolls.	
neering manual, change.....	10085	PCA, see Production credit associa-	
flexible, subjected to channelized		tions.	
traffic, total thickness and		PCM-FS, see Pulse-code-modulation-	
compaction requirements.....	2229	frequency-shift.	
		Pea aphids, ecology, in Blue Moun-	
		tain area.....	18445

# INDEX 1963

	Entry		Entry
Pea Island National Wildlife Refuge, general information.....	17456	Peak, George W., water supply outlook and Federal-State-private cooperative snow surveys for Wyoming .....	4292
Peace:		Peanuts:	
food for peace—		for boiling, definition, extend—	
newsletter about activities under PL 480.....	10094	hearing.....	9919
program around world, community feeding programs manual.....	5093	reports.....	9886, 11842
Italian Communist views.....	2946	for boiling, extend exemption from agricultural adjustment act—	
Japan Socialism Reform Movement Preparatory Council comments.....	1038	law.....	15155
movement, Communist activities, hearings.....	9950	report.....	13722
new opportunities in search for peace, address by President Kennedy.....	18536	market news, weekly report.....	4010
power for peace, Armed Forces Day—	20145	marketing farmers' stock, Virginia and North Carolina area.....	9579
manual.....	6308	errata.....	13174
speakers' guide for service spokesmen.....	8143	moisture meter study, 1962-63.....	18378
President Kennedy's report on protecting the peace (address).....	1577	price summary, 1920-62.....	4332
step toward, report to people on nuclear test ban treaty, address by President Kennedy.....	14935	stocks and processing.....	4011, 21137
toward strategy of peace (address).....	18232, 18234	Pearl, Robert B., gross changes in labor force, problem in statistical measurement.....	12808
UN, action agency for peace and progress.....	18328	Pearl Harbor day, proclaim Dec. 7, 1966, in commemoration of 25th anniversary of attack, report.....	17148
USSR, vigilantly stand guard over the peace.....	10828	Pears:	
Peace Corps:		Bartlett, early-season, ripening at various transit temperatures.....	13145
Deputy Director, nomination of Bill D. Moyers, hearing.....	4775	blight.....	14861
foreign operations appropriations, 1964, hearings.....	18918	canned, standards for grades.....	16709
news (periodical).....	4007	production, use, value, by States, 1961-62.....	16615
Peace Corps volunteer (periodical).....	3253, 4008	winter, promotional programs effect on sales.....	14866
press releases.....	4082	Pearson, Albin O.:	
program, agreement with—		aerodynamic, etc., characteristics of nonlifting reentry capsule in combination with rocket booster.....	5565
Afghanistan.....	1538	surface pressure distributions on proposed Project Fire Space vehicles at Mach numbers from 0.25 to 4.63.....	19928
Cameroon.....	1540	wind tunnel investigation of static aerodynamic characteristics of Project Mercury capsule.....	5563
Ceylon.....	9411	Pearson, Gregory L., water supply outlook and Federal-State-private cooperative snow surveys for Utah, etc.....	4290
Chile.....	3349	Pearson, Richard G.:	
Cyprus.....	1535	injury causes in lightplane causes.....	3384
Gabon.....	1557	judgment of volume from photographs of complex, irregular shapes.....	11351
Guatemala.....	11324	Pears:	
Guinea.....	9412	dry, foreign trade prospects.....	10208
India.....	7450	foreign agriculture circular.....	3720
Niger.....	16590	Peasantry, Venezuela, guerrilla threats against.....	2859
North Borneo.....	3350	Peasants:	
Peru.....	11312	Vietnamese—	
Sarawak.....	3351	laboring, characteristics and true nature.....	17704
Togo.....	1559	nature, translations.....	17763
Turkey.....	1560	see also Peasantry.	
questions and answers.....	3252	Peat:	
volunteer—		minerals yearbook chapter.....	19855
opportunities in Federal civil service.....	13329	Ukrainian, microbiology, USSR study.....	20915
quarterly statistical summary.....	1384, 4009	Pecans, insects and diseases, control.....	11448
Peace River:		Pecatonica River:	
flood control, etc., engineer report—departmental edition.....	4856	flood control, engineer report—departmental edition.....	2214
document edition.....	4689	document edition.....	1986
Peaches:		Peck, A. S., infrared studies of oleic acid and sodium oleate adsorption on fluorite, etc.....	9130
California clingstone production, forecast.....	16622	Peckham, Robert S., basic data on economy of Republic of South Africa.....	6591
economic feasibility of radiation-pasteurizing.....	19090		
Georgia and South Carolina, marketing, 1962 season.....	13152		
insect pests in regions east of Rocky Mountains.....	16732		
phony disease, control.....	31		
production, use, value, by States, 1961-62.....	16615		
thermal characteristics as related to hydrocooling.....	18447		
Peacock, Earl G., Panel on Science and Technology, report.....	2060		



# JANUARY-DECEMBER

Entry	Entry
Pecos River and Valley: depletion in New Mexico, causes... 5037 water, reduce nonbeneficial consumptive use in basin— hearing ..... 13813 report ..... 19033	Penland, Jim A., static longitudinal aerodynamic characteristics of several wing and blunt-body shapes applicable for use as reentry configurations, etc. .... 10993
Pectin, fed rats, plasma and liver lipids, fecal bile acid and steroid excretion ..... 11549	Pennell, Maryland Y., health manpower source book, sanitarians ..... 12995
Pectinophora gossypiella, <i>see</i> Pink bollworms.	Pennington, Jack E., effects of display noise on pilot control of terminal phase of space rendezvous ..... 16365
Pedagogy, <i>see</i> Education.	Pennington, Maitland S., remarks, May 9, 1963 ..... 10931
Pediatrics, <i>see</i> Children.	Pennington, R. T.: EVESR nuclear superheat fuel development project, reports ..... 7698, 9678, 16841
Peer ratings, <i>see</i> Ratings.	nuclear superheat project— 12th quarterly report, Apr.-June 1962 ..... 16837 13th quarterly report, July-Sept., 1962 ..... 16838
Peevey, Michael R., trends in farm employment and training needs ..... 16266	Pennsylvania: annual survey of manufactures, 1961, States, standard metropolitan statistical areas, and large industrial counties statistics ..... 4565 climatological data ..... 3517 community economic redevelopment programs, case studies ..... 16817 compact to establish Delaware River Joint Toll Bridge Commission, consent of Congress, hearing, county business patterns, activities covered by OASDI program ..... 13282 errata ..... 18671 electric rate book ..... 17432 geology and uranium occurrences of Lehigh, Pa., quadrangle ..... 19293 mineral industry, minerals yearbook chapter ..... 3065 population, 1960, characteristics ..... 18661 precipitation data, hourly ..... 3771 public school finance program, 1962-63 ..... 13859 surface waters, chemical quality ..... 6566 weather stations, decadal census ..... 16652 women workers, 1960 ..... 3409 ZIP code directory ..... 20062
Pegmatite: and other Precambrian rocks in southern Black Hills (series) ..... 14020, 15608	Pennsylvania anthracite, <i>see</i> Coal.
Beecher no. 3-Black Diamond exploration, Custer County, S. Dak ..... 14019	Pennsylvania RR., accidents ..... 638, 10357-358, 10361, 14080
Fourmile quadrangle, Black Hills, S. Dak ..... 14020	Pennsylvanian period: geology of rocks, Tremont quadrangle, Pa ..... 5013 limestones from central Texas, petrography and environmental analysis ..... 19309 rocks in Kansas, stratigraphy and paleontology ..... 8334 rocks of west and central Texas (series) ..... 19309 stratigraphy, areas between Brazos and Colorado Rivers, north-central Texas (series), title page and contents ..... 10277
Helen Beryl, Elkhorn, and Tin Mountain, exploration for beryllium ..... 15608	Pensacola, Fla.: and challenge of trade expansion (address) ..... 5091 harbor, engineer report— departmental edition ..... 445 document edition ..... 255
Pelzer, H. Steffen, crystal growth, etc., research at NBS ..... 9216, 19953	Pensions: Coast Guard good conduct retirement pay, repeal— hearing ..... 13798 law ..... 17044 reports ..... 11974, 15254, 17120 code of Federal regulations ..... 10170
Peking, China: changes around Fu-hsing Gate ..... 1137 streets and alleys, guide ..... 657	
Pelican Lake, bed or former bed, disclaim title of U.S. to certain property, report ..... 20461	
Pellecer, Carlos M.: ex-Communist, comments by Mexican press ..... 3007 PGT condemnns ..... 2866	
Pellet seedling on Western rangelands ..... 11461	
Pellets: feeding pelleted rations to beef cattle ..... 4375 sintered, fabrication of fuel rods, design ..... 16847	
Pellini, W. S.: applicability of high strength quenched and tempered steels to submarine hull construction ..... 11190 fracture analysis diagram procedures for fracture-safe engineering design of steel structures ..... 18250	
Pemmican, liver constituents in rats fed pemmican meals ..... 11499	
Pen flares, <i>see</i> Flares.	
Penaloza, Dante, influence of high altitudes on electrical activity of heart ..... 71	
Penalties: bribery in sporting contests, report ..... 20588 feed sale by CCC for maintenance of foundation herds, misuse, report ..... 13721	
Pendleton, Camp: land easement for nuclear electric generating station— law ..... 15161 reports ..... 13610, 13752	
Pendulum, <i>see</i> Gravity.	
Penfield, N.Y., population, special census ..... 18697	
Penholders, writing, Federal standard ..... 19215	
Penicillin, antibodies to, USSR study ..... 19536	
Penitentiaries: national, investigation— extension, report ..... 6258 report on findings ..... 8057	

# INDEX 1963

Entry	Entry
Pensions—Continued	
concurrent payments of unemployment benefits and retired pay to Armed Forces retirees, GAO report	15591
plans for salaried employees, spring 1963, digest	20929
plans made under collective bargaining, spring 1961, digest, errata	10894
private plans—	
and manpower policy	12806
benefits	14697
effect on labor mobility	10910
employer contributions to, provisions of P.L. 87-863	1498
public employee retirement credit transferability among Government units, report	9524
public employees, 1962	11287
unfunded plans, prevalence and characteristics	5460
veterans—	
aphonia, additional compensation—	
law	11714
reports	4732, 9975
dying from service-connected disabilities, increased payments for parents and children—	
law	11713
reports	6144, 9974
enlisted men, credit inactive Reserve service—	
hearings	13640
report	13606
service-connected deafness of both ears, additional compensation—	
law	11712
reports	4730, 11947
service-connected, disabled, increase rates of compensation, report	6148
widows, increased rates of compensation—	
law	18780
reports	17109, 17292
welfare and pension benefit plans, financial data, 1959	16271
welfare and pension plans disclosure act—	
amendments, 1962, legislative history	5723
bonding in excess of \$500,000	10884
welfare and pension plans, statistics—	
1960	7140
100 largest plans, 1959-61	18020
see also Civil service pensions.	
Pentaborane, ram-jet engine fuel investigation, downstream fuel injection	5518
Pentamethylenetetrazol, metrazol, use for treatment of psychiatric disorders, bibliography	16517
People (North Viet-Nam periodical):	
translations	12466
People, skills, jobs	20924
People's army (Bulgarian periodical):	
translations	12683
People's army (North Viet-Nam periodical):	
translations	5339
People's daily (Chinese periodical):	
French and Italian attacks on Chinese Communist Party	9014
translations	12339
People's Democratic Republic of Korea, see Korea.	
People's Republic of China, see China.	
People's Republic, Mongolian, see Mongolia.	
Pepper, Leonard:	
aluminum-coated wires as reinforcement for concrete mattresses	4875
fly ash content, effectiveness in preventing expansion of concrete	13890
Perazich, George, economic effect of textile mill closings, selected communities in Middle Atlantic States	11685
Perception:	
algorithmic structure of active touch, USSR study	12655
auditory, concurrent repetition of continuous flow of words	9099
discrimination in auditory and visual patterns	9100
distortion, experimental approach to illusion	1371
observer tolerance of form transformation as function of form complexity	14914
problems and phenomenon of attunement of sense organs, USSR study	14164
visual—	
acquisition of probabilistic discrimination between subsequent alternative events	9614
of depth, effect of learning	5657
Perceptron, feature characteristics and 6th feedback loop, USSR study	19677
Perez, Maximo A., Venezuelan parliamentarian denounces terrorist line of CP and MIR	2521
Perfluodicarbonic acids:	
derivatives	18509
method of obtaining	18515
Perfluorized dicarbonic acid, see Perfluodicarbonic acids.	
Perfluoroalkanes, linear, thermal decomposition in Inconel bomb	14552
Performance (psychology):	
effects of acute radiation on human performance	5884
Performance ratings, see Efficiency ratings.	
Performance, story of the handicapped	4014
Periclase:	
P-T univariant equilibria of reaction forsterite + calcite-monticellite + periclase + CO <sub>2</sub> , experimental studies on Bowen's decarbonation series, II	16385
thermodynamic data	18103
Perigee propulsion for orbital launch of nuclear rockets	1325
Periodicals:	
aerospace, for teachers and pupils, science service, list	13864
agricultural sciences, Communist China, bibliography	12890
Air University periodical index	3443
Army Library—	
checklist currently received	5778, 7524, 9522
selected literature, list	
copyrighted, catalog of copyright entries	338, 12031, 13826
Government, price lists	5679, 21078
importance to American life (address)	7808
international Communist development translation, publications used in preparation, list	12624
international understanding, educational materials, lists	374, 10069
magazine reprint MR series	5850

# JANUARY-DECEMBER

	Entry		Entry
Periodicals—Continued		Perregaux, Algeria, economy of district	12328
military, Air University Library index	16779	Perry, Barbour L., method of synthesizing higher order functions	11171
Patent Office Scientific Library	5669	Perry, R. E., flotation of northeast Birmingham, Ala., hematite ores	3081
publishing industry, outlook for 1963 and review of 1962	4544	Perry Sesquicentennial Committee, Inc., Treasury Dept. to supply and sell commemorative medals, reports	13751, 18850
received in Washington, D.C., NBS Library	1330	Perry's Victory and International Peace Memorial National Monument, general information	18209
serial publications indexed in Bibliography of agriculture	11092	Pershing, John J., and anatomy of leadership	13194
social science bibliography—Denmark, 1945-61	7764	Persian Gulf: lights and fog signals, lists	9259, 19989
Iceland, 1950-62	1900	sailing directions, change	12937
translated and published in technical translations, list	5957	Persian language, transliteration	18054
Periodontal disease:		Persimmons, production, use, value, by States, 1961-62	16615
horizontal tooth mobility, instrument for measuring	18504	Personal affairs:	
screening examination for detection of gingival and periodontal breakdown and local irritants	18503	food caterer's ideas on personal welfare and ideological discipline, Communist China study	2852
Perishables, see Agricultural products.		PACAF basic bibliographies	5880
Perjury:		Personal and family survival, civil defense adult education course student manual	11656
false statements in obtaining license to sell insurance in D.C., amend insurance acts—		Personal property:	
law	13431	Federal surplus—	
reports	6157, 13731	acquisition for health, educational, and civil defense purposes	6570
Perkins, E. C., bacterial leaching of manganese ores	1241	for public airport purposes	482
Perkins, George D., improvement of Materials Central mass spectrometer	18448	surplus—	
Perlee, Henry E., compressor and related explosions	18075	how to buy from Defense Dept.	10040
Perlite, minerals yearbook chapter	18087	utilization at selected installations of General Services Administration and other Federal agencies, GAO review	595
Perlman, Jacob:		Personality:	
Federal funds for science, 11, 1961-63	11128	Air Force officers, peer ratings as predictors of disciplinary problems	4462
Federal organization for scientific activities, 1962	7342	personality and neuroses, USSR study	12486
Perlmutter, Morris, angular distribution of emitted and reflected radiant energy from diffuse gray asymmetric grooves	20992	sensory deprivation and pain relationships for space travel, study	18166
Perlmutter, Nathaniel M.:		trend, question of experimental investigation, USSR study	12444
availability of fresh ground water, Montauk Point area, Suffolk County, Long Island, N.Y.	14031	Personnel, see Social workers.	
geology and ground-water conditions in southern Nassau and southeastern Queens Counties, Long Island, N.Y.	12234	Personnel administration, see Administrative management.	
ground-water geology and hydrology of Maynard area, Mass.	2354	Personnel development, see Administrative management.	
Permafrost, discontinuous, ground-water occurrence in Fairbanks area, Alaska	6344	Personnel management, see Administrative management.	
Permanent Subcommittee on Investigations, see Government Operations Committee, Senate.		Personnel management series	15116
Permeability:		Personnel manual, see Civil service.	
graphite to gases at high temperatures, process for reducing	14960	Personnel methods series	190, 18735
rapid determination in porous rock	1238	Personnel Research Laboratory:	
Permian period:		technical documentary reports	63-67, 1772-73, 4401-7, 5882-83, 7622-26, 9622-26, 11512, 13213, 16783-787, 18493-496.
lower, rocks of west and central Texas (series)	19309	abstracts, 1962	7624
rocks in Kansas, stratigraphy and paleontology	8334	Personnel restraint systems study, basic concepts	11349
stratigraphy, areas between Brazos and Colorado Rivers, north-central Texas (series), title page and contents	10277	Personnel services in education, see Counselors.	
Permits, see classes of persons to whom, or subjects for which, permits are issued.		Personnel workers:	
Peroxides, cerebral lipid, effect of oxygen-rich atmospheres on	9106	officer, position classifier, etc., examination announcement	15102
		preparation for school and college work, programs, etc., 1963-64	13854
		Perspectives in materials research	11151

# INDEX 1963

Entry	Entry
Perspiration : excretion of— minerals and relation to mineral balance, etc.----- 1813 nitrogen in relation to balance, environment and physical ac- tivity ----- 1812	Pests : citrus, burrowing nematode----- 18442 control— engineered performance stand- ards— formulas ----- 11421 handbook ----- 11422 plant, cooperative programs, western region, 1961----- 7552 control against fettered death, Czechoslovakian study----- 895 forest pest control act, accomplish- ments in national forests of Nevada, Idaho, Utah and Wy- oming, 1961----- 10230 forest pest leaflets----- 4981, 8293, 10210, 15551-552, 17472 intercepted plant pests, list----- 9548 plant pest carriers, requirements for interstate movement, guide ----- 5802 watch for new plant pests (see ries) ----- 14884-887 see also Insects—also names of in- dividual pests.
Perturbation theory : guidance perturbations for low- thrust Mars orbiter mission using Snap-8, analysis----- 1278 singular problems, application to viscous flow over flat plate----- 14572	Petermann, Fernando B. : electric furnace smelting— high-iron manganiferous mate- rials for producing ferroman- ganese ----- 10958 offgrade manganese ores, etc.----- 3078
Perturbations, planetary, computa- tion ----- 16394 see also Three-body problem.	Peters, Frank A. : methods for producing alumina from clay ----- 10962 evaluation of hydrochloric acid processes ----- 3091 potassium alum process----- 19862
Peru : agricultural trade, agreement----- 21132 Communists and military junta----- 2833 defense, furnishing of articles and services, agreement----- 9420 economic developments, 1962----- 8413 establishing business----- 2421 fishing industry, major develop- ments, 1960-62----- 554 gas appliances, household and com- mercial, U.S. market----- 18622 import tariff system----- 6600 Indians, native to high altitude, thermal and metabolic re- sponses to cold ----- 18478 labor problems----- 2588, 2628 Peace Corps program, agreement----- 11312 petroleum resources and uranium possibilities, Pucallpa region, Loreto Department----- 14998 southern, reconnaissance----- 9685 study mission report----- 9863 uranium reconnaissance— coast from Lima to Talara----- 14997 Cuzco-Anta area----- 11581 Iquitos area, Loreto Dept----- 14999 Sayapullo Mine area, Cajamarca Department ----- 16854	Peters, J. sensory deprivation, pain and personality relationships for space travel ----- 18166 Peters, Stephen, see Duncan-Peters, Stephen. Petersburg National Battlefield, gen- eral information ----- 11121 Peterson, Clarence E., civil and high- way technology, determining courses of study for vocational education ----- 6346
Peru, Ind., ground-water geology and hydrology of Bunker Hill Air Force Base and vicinity----- 19323	Peterson, Esther : addresses— Jan. 25, 1963----- 9515 Feb. 23, 1963----- 9024 Apr. 9, 1963----- 9023 Apr. 16, 1963----- 9022 July 23, 1963----- 14433 Sept. 20, 1963----- 18018
Pervomayskiy Rayon of Moscow----- 7028	Peterson, H. B. : combination runway foaming-tanker vehicle for fire fighting----- 18238 discharge characteristics of potas- sium bicarbonate dry chemical fire fighting agents from car- tridge and stored pressure ex- tinguishers ----- 16460 vacuum pneumatic process for fill- ing large dry chemical fire ex- tinguishers ----- 18253
Pesticides : aerial spraying, etc. by Forest Ser- vice, value, safeguards, etc.----- 16755 chemical, summary of registered ag- ricultural uses, supp----- 1663, 13161 consultation with Fish and Wildlife Service, etc., before Federal programs, hearings----- 15324 economic poisons— emergency information for treat- ing poisoning, clinical hand- book ----- 16493 labelling and registration— hearings ----- 18917, 19041 report ----- 19034 general information----- 20100 intoxication, clinical picture and therapy, USSR study----- 17669 minimize injurious effects, hear- ings ----- 15324 pesticide-wildlife studies, review of Fish and Wildlife Service in- vestigations, 1961-62----- 17447 residues, facts for consumers----- 20691 respiratory devices for protection against ----- 9538 situation for 1962-63----- 16725 use, report of President's Science Advisory Committee----- 11210	Peterson, H. E., methods for analy- zing tungsten ores and con- centrates ----- 3102 Peterson, H. V., hydrology of small watersheds in Western States----- 2352 Peterson, James P., buckling strength of pressurized cylinders, er- rata ----- 5567 Peterson, John B., Jr., comparison of results for compressible tur- bulent boundary-layer skin friction, with zero pressure gradient ----- 9187 Peterson, Maurice J., spectrochemical determination of beryllium in mineral beneficiation prod- ucts ----- 3090

# JANUARY-DECEMBER

	Entry
Peterson, N. P., geology of Pinal Ranch quadrangle, Ariz.-----	15603
Peterson, Paul Q.:	
health manpower source books-----	1407
medical specialists-----	11236
Pharmacists-----	
Peterson, Roger S., comandra blister rust in central Rocky Mountains-----	6515
Petit Caillou Bayou:	
flood control survey, etc., engineer report-----	2178
departmental edition-----	2006
document edition-----	
Petkof, Benjamin, quartz crystal, electronic-grade-----	16329
Petrasek, Donald W., alloying effects on tungsten-fiber-reinforced copper-alloy or high-temperature-alloy matrix composites, alloying effects-----	19907
Petrash, Donald A.:	
effect of acceleration disturbances encountered in MA-7 spacecraft on liquid vapor interface, etc.-----	3152
effect of surface energy on liquid-vapor interface configuration during weightlessness-----	5590
liquid-vapor interface configuration during weightlessness-----	21004
Petree, Ben, construction of calorimeters for measurement of absorbed dose-----	1334
Petrified Forest National Park, general information-----	9245
Petrography, see Rocks—also names of rocks.	
Petroleum:	
Brazilian Petroleum Company, annual report, 1962-----	15709
bulk stations and terminals, census of business 1963, wholesale trade-----	16877
China-----	814
crude oil—	
Louisiana and Texas Gulf Coast area, analysis-----	16337
market demand forecast, monthly-----	4017
stocks, mineral industry survey, weekly-----	3572
crude petroleum and products—	
minerals yearbook chapter-----	20943
monthly statement-----	4018
1961, final summary-----	1199
highways and petroleum, twin factors in progress (remarks)-----	9367
imports, small business problems, report-----	2041
industry, injury experience, 1962-----	20944
International Convention for Prevention of Pollution of Sea by Oil—	
amendments, text-----	8025
report-----	20540
text-----	20517
international trade, monthly inventory-----	3799
interstate compact to conserve, consent of Congress to extend—	
hearings-----	13659, 19057
law-----	17045
reports-----	15357, 17110
lease no. Sacramento 037552-C, re-instate and validate, report-----	15279
leases, agreement with Navajo Tribe of Indians, approve, reports-----	17270, 20485
lubricating oils, anti-wear properties, effect of composition and nature of gaseous media on-----	13221

	Entry
Petroleum—Continued	
oil productive formations—	
Mississippi and Alabama, analysis of brines-----	5493
south Arkansas and north Louisiana, analyses of brines-----	18099
oilfields—	
equipment and machinery industry, outlook for 1963 and review of 1962-----	4547
strata waters, effect of freshening on development of halophile sulfate-reducing bacteria, USSR study-----	10383
paraffin and other blocking agents that interfere with production, bibliography-----	7207
plants, investment and operating costs, Jan.-Dec. 1962, bibliography-----	12831
processing in Yugoslavia, development and problems, translations-----	15705
products—	
and law, how to comply with Federal hazardous substances labeling act-----	6473
bibliography-----	1869
containers, reinforced concrete stressed construction, USSR study-----	2865
distribution by administration districts-----	3607
mobile tanks, anti-corrosion protection, USSR study-----	6824
survey (series)-----	1228
5474, 9117, 14504-505, 18088	
wholesale or bulk distribution by enterprises, employment exempt from overtime pay requirements under fair labor standards act-----	1591
publications, price list-----	18280
recovery—	
by miscible-phase displacement, bibliography-----	12828
in Cooke and Grayson Counties, Tex., effects of water injection-----	9135
of oil by waterflooding, hydraulic fracturing application-----	12827
reservoir oil characteristics, Greater Aneth area, Utah, saturation-pressure variations-----	10944
resources, Pucallpa region, Loreto Department, Peru-----	14998
Soviet oil development and export of strategic materials to, hearings-----	2099
storage in commercial facilities—	
examination of costs to Government under Defense Dept. negotiated contracts, GAO review-----	6532
Plattsburgh, N.Y., unnecessary expenditures of more than \$1 million under Defense Dept. contracts, GAO report-----	14011
San Francisco, Calif., area, unnecessary annual expenditures by Air Force and Navy Depts., GAO report-----	15599
underground combustion oil-recovery experiment in Venango First sand-----	19875
waterflooding projects, Butler and Cowley Counties, Kans., 1963-----	12829
well drilling, machinery and equipment industry trends-----	150
West Virginia oilfields discovered before 1940-----	7203

Do not order from index; see indicated entry

Page 471



# INDEX 1963

Entry	Entry
Petroleum—Continued	Phase rule and equilibrium:
Wilmington, Calif. crude oil, identification of 2,2,5-trimethylthiacyclopentane and 2,2,5,5-tetramethylthiacyclopentane—	helium bearing natural gases, low temperature phase equilibria—
world statistics—	Hansford gas—
quarterly—	Hogback gas—
see also Naval petroleum reserves—	helium-nitrogen-methane system, vapor-liquid equilibria—
Oil shale—Pipe lines.	see also Critical point.
Petroleum as fuel, see Fuel oil.	Phase shift:
Petroleum engineering:	electron-hydrogen, just below inelastic threshold—
Hall-Gurney oilfield, Russell County, Kans., study—	errata—
velocity of sound in petroleum reservoir rocks and other mediums, bibliography—	Phase shifter, ferrite-loaded open transmission line—
Petroleum products, see Petroleum.	Phase studies:
Petroleum refineries:	choking 2-phase flow literature summary and idealized design solutions for hydrogen, nitrogen, oxygen, and refrigerants 12 and 11—
Including cracking and reforming plants in U.S., Jan. 1, 1963—	determination of diffusivity and solubility in 2 phase systems—
USSR, development and location of oil refineries, problems—	Phase transformations, see Transformation temperatures.
Petrology, see Rocks.	Phelps, M. E., reinforced plastic coatings for protection of steel surfaces—
Pets, importation by travelers, regulations—	Phenols, X-ray powder diffraction patterns—
Pettibone, Marian H., marine polychaete worms of New England region—	Phenoxy herbicides, 2,4-D and related types, response of cotton—
Pettijohn, F. J., chemical composition of sandstones, etc.—	Phenyl ether, iron catalyzed hydrogenation—
Petylna, William W., water landings of winged reentry configuration having outboard folding wing panels—	Philadelphia, Pa.:
Péwé, Troy L., frost heaving of piles, Fairbanks, Alaska—	census of housing 1960, standard metropolitan statistical area, components of inventory change—
Pezelj, Katarina, relief—	civil rights, public schools, 1962—
PF-series—	consumer expenditures and income, 1960—
Pfeffer, Aloysius R., employer expenditures for selected remunerative practices for production workers in mining industries, 1960, departmental edition—	advance report—
Pfyl, Frank A., circular internal-compression inlets with translating centerbodies employing boundary-layer removal at Mach number from 0.85 to 3.50—	supplement—
PGT, see Communist Party of Guatemala.	electric facilities of area, map—
PHA, see Public Housing Administration.	income, education, and unemployment in neighborhoods—
Pharmaceuticals, see Drugs.	occupational wage survey—
Pharmacies, Hungary, operation—	departmental edition—
Pharmacists, health manpower source book—	document edition—
Pharmacodynamics of psychic functions of central nervous system, Czechoslovakia—	outdoor recreation needs of megapolis, New York-New Jersey-Philadelphia region—
Pharmacologists, examination announcement, salary adjustments—	post offices mail-flo systems, feasibility and effect of systems upon operating costs, GAO report—
Pharmacology:	Philately and philatelist, see Postage stamps.
abstracts pertaining to Communist China in Soviet journals—	Philippine Islands:
pharmacological agents, action on intracranial circulation—	agricultural commodities, agreement—
pharmacology and toxicology (USSR periodical), translations—	aircraft accident—
role in development of medical science, USSR study—	cephalopods—
Pharmacology and toxicology (USSR periodical):	contributions to biology, title page, etc.—
translations—	economic developments, 1962—
Pharmacy, Veterans Administration, require to fill private physicians' prescriptions, GAO report—	economic relations with U.S. (remarks)—
Phase analysis of nonferrous alloys, USSR—	educational foundations and financing of exchange programs, agreement—
Phase diagram, aluminum-lithium system—	exports and imports, licensing and exchange controls—
	foreign trade, 1960-61—
	gas appliances, household and commercial, U.S. market—
	general information fact sheet—
	grants, appropriations, 1964, hearings—
	health information for travel—
	lessons learned 1946-53, facts for Armed Forces (lecture)—
	population—

# JANUARY-DECEMBER

Entry	Entry
radio broadcasting facilities, agreement 14731	geology of northern Florida deposits 8329
relinquishment of U.S. Naval Radio Transmitting Facility at Bagumbantay, Queson City, agreement 9438	inorganic, permeability of hematoencephalic barrier in acute radiation sickness, USSR study 20920
role at conference on formation of Malaysia federation, German studies 17684	pneumatic vibrating blade planer, test operation 3095
sailing directions, change 14620, 19988	superphosphate and other phosphatic fertilizer materials, current industrial reports, summary 15069
U.S. High Commissioner, records of office, preliminary survey 7306	1962 3574
United States Army in World War II, triumph in the Philippines 12820	superphosphates, current industrial reports 8574
USS Canopus, disposal of, agreement 1537	see also Sodium polyphosphates.
veterans hospitalization, etc., agreement 16600	Phosphoryridine nucleotides:
veterans hospitalization, extend grants-in-aid program, etc.—hearing 8126	di- and triphosphoryridine, liver, effect of cold acclimatization on 11498
law 13414	participation in respiration of chlorella, USSR study 12638
reports 6140, 11960	Phosphorus:
war damage claims, payment—law 17024	and potassium fertilizers, effects on yield, etc. of grass-legume mixtures 16712
report 13598	compounds, effect on insects, physiological mechanism, USSR study 19359
Philippines, see Philippine Islands.	dermal excretion, relation to balance, etc. 1813
Phillips, Harry L., modern mathematics and your child 15434	metabolism, in deer 18562
Phillips, John J.:	Phosphorylation, substrate-linked, effects of chlorinated hydrocarbons 16866
advance reproduction under mature oak stands of New Jersey coastal plain 10235	Photochemical problems of Venus atmosphere 14591
some effects of competition on survival of yellow-poplar seedlings 10219	Photochemistry:
Phillips, R. V., Haines City story 2240	oxidation of anthracene compounds, mechanism of effect of aromatic amines 10778
Phillips, V. Estelle, Air University Library index to military periodicals 16779	photolysis of polymethyl acrylate in vacuum and in air 11191
Philosophical questions of transformation of nature, USSR 7098	Photoconductivity, fast solid-state ultraviolet photodetector, development 20299
Philosophy:	Photodegradation of high polymers 11191
cybernetics, problems, USSR conference 6666, 6843	Photoelectric properties of germanium doped with gold and zinc, USSR 7037
essence of life, USSR study 2839	Photoelectricity, airways lighting devices, maintenance 12095
science and information theory, philosophical aspects, USSR studies 16098	Photogrammetric mapping, see Photographic surveying.
Phipps, Howard M., growth response of some shelterbelt species following sod removal 15568	Photogrammetry, see Photographic surveying.
Phoenix, Ariz.:	Photographers, mate 2, navy training course 5656
electric facilities of area, map 520, 2266	Photographic apparatus and supplies: Federal item identification guides for supply cataloging, supplement 3657
income, education, and unemployment in neighborhoods 10917	industry outlook for 1963 and review of 1962 1861
occupational wage survey—departmental edition 12802	Japanese industry, development, 1961 145
document edition 11747	U.S. foreign trade, 1962 18636
Sky Harbor Airport, weather observations, hourly, decennial census 11387	Photographic census of Stellar sea lion herds in Alaska, 1956-68 13973
Phonics in beginning reading 12071	Photographic film detectors, dosimetry film identified with reassigned film badge number 11560
Phonocardiography, significance in investigation of mitral lesions of heart, USSR study 2968	Photographic study of liquid hydrogen under simulated, zero gravity conditions 11013
Photographs:	Photographic surveying:
and record player attachments, current industrial reports 16596, 20351	C&GS training facilities in photogrammetry, one-day program for engineering students 1952
Federal item identification guides for supply cataloging, supplement 3659	photogrammetric mapping, engineer manual 10086
Phonorecords, Library of Congress catalog 18057	solutions of long-line geodetic azimuths by photogrammetric techniques 16769
Phony peace disease, control 31	
Phosphate slimes, Florida, chemical and physical beneficiation 5490	
Phosphates:	
deposits, Florida land-pebble district 20730	
effects of alkaline phosphate solutions at elevated temperatures on compounds prepared at room temperature 11185	

# INDEX 1963

Entry	Entry
Photographs:	Physical fitness:
copyrighted ----- 4790	adult, program for men and
House of Representatives in session,	women ----- 16488
grant U.S. Capitol Historical	Army program--
Society permission to take, re-	female special staff personnel and
port ----- 20477	TD organizations program, 1800
unscreening of images for optimum	Army pamphlet ----- 14940
visual information, French	specialists and staff personnel,
study ----- 1063	DA pamphlets ----- 1799
use for judgment of volume of com-	changes ----- 7669, 14939
plex, irregular shapes ----- 11351	assessment, simple field test for avi-
Photography:	ation personnel ----- 16867
material evidence, investigating,	Navy program, shape up exercises - 19996
USSR study ----- 5164	President's Council, statement by
PACAF basic bibliography ----- 5881	the President, problem, aims,
photographer's mate 2, Navy train-	etc ----- 12974
ing course ----- 5656	program planning, invaluable
reproduction characteristics com-	guides, announcement ----- 11215
pared with television, USSR	youth programs, message from the
study ----- 2737	President ----- 4728
television photography of moon,	Physical geography:
USSR study ----- 15857	Communist China ----- 16022
see also Aerial mapping--Aerial	physiographic and hydraulic studies
photography.	of rivers (series) ----- 17528
Photo-ionization, see Ionization.	Physical insulation of Korean diving
Photolysis, see Photochemistry.	women ----- 1759
Photometry, early type stars, survey - 21022	Physical measurements, precision,
see also Spectrophotometry.	standards, selected papers, er-
Photostress and flash blindness in	rata ----- 9201
aerospace operations ----- 18507	Physical medicine, see Medicine.
Photostress and flash blindness,	Physical sciences, see Science.
study ----- 4422	Physical therapists:
Photostress test for evaluation of	examination announcement ----- 192
macular function ----- 16805	amendment ----- 13322
Photosynthesis:	discontinuance notices ----- 186-187
energy budget at earth's surface. 16756-	5th all-Russian scientific-practical
757	conference ----- 20825
mechanism, Rumanian studies with	Public Health Service hospitals,
radioactive C <sup>14</sup> ----- 8997	careers ----- 9347
primary production of bodies of	Physical therapy:
water ----- 14959	aerions, effect on organism, USSR
problems, reports of 2d all-Union	study ----- 19602
conference ----- 1816	department, planning, design equip-
Phototachymetry, equipment, new de-	ment ----- 3285
velopment, USSR study ----- 20801	step into action, guidebook for
Phototelegraphy, Ladoga apparatus	above-knee amputee ----- 9356
used for recording ocean depths	USSR studies, translations ----- 15838
measured by fathometers,	Physically handicapped, see Handi-
USSR study ----- 6795	capped.
Phototypesetting of computer output,	Physically Handicapped, President's
example using tabular data ----- 14599	Committee on Employment of,
Phreatophytes:	see President's Committee on
activities, report 1962 ----- 18299	Employment of the Handi-
control in Pecos River Basin--	capped.
hearing ----- 13813	Physicians:
report ----- 19033	Armed Forces appointment and re-
effect on Pecos River depletion in	sidency consideration program,
New Mexico ----- 5037	information bulletin ----- 10033
PHS, see Public Health Service.	aviation medical examiners, list - 13254
Physical chemistry, corrosion research	Bulgaria--
in Soviet Union, visit to Soviet	commissions of labor-specialists,
corrosion chemistry institutes. 7717	instructions governing ----- 2486
Physical conditions on Mars ----- 18175	Institute for Specialization and
Physical constants, recommended by	Advanced Study of Physicians. 5147
NAS-NRC, adopted by NBS. ----- 21027	guide for disability evaluation ex-
Physical culture, see Physical educa-	aminations for Veterans Ad-
tion and training.	ministration ----- 14766
Physical education and training:	handbook on medical aspects of
5th all-Russian scientific-practical	radiation accidents ----- 11589
conference ----- 20825	internships in Public Health
participation in physical culture,	Service ----- 20107
etc., by middle-aged and older	professional public health personnel,
workers, USSR study ----- 20824	increase opportunities for
program planning, invaluable	training--
guides, announcement ----- 11215	hearings ----- 6199, 17326
Physical examinations:	law ----- 18776
allens, medical examination ----- 20106	summary ----- 19335
periodic health examinations, ab-	reports ----- 6180, 7945, 17283
stracts from literature ----- 13020	Public Health Service ----- 13021
veterans, disability evaluation,	commissioned officer residency de-
physician's guide ----- 14766	ferment program ----- 14658

	Entry		Entry
Physicists, Hungarian, 9th congress held in Debrecen, 1962.....	8923	Physiography, see Physical geography.	
Physico-chemical investigations of SiC-B <sub>4</sub> C section of Si-B-C system.....	938	Physiological and biochemical evaluation of potential anti-fatigue drugs.....	7685-87
Physicochemical properties of glass fiber, USSR.....	10823	Physiological instrumentation system, microminiaturized system, airborne.....	5858
Physics:		Physiological mechanism of orientation of honey bee in space, USSR.....	995
abstracts pertaining to Communist China in Soviet journals.....	987, 12734	Physiologists, southern RSFSR, conference report.....	5268
atmospheric, journal of research, National Bureau of Standards.....	3818	Physiology:	
college, USAFI study guide.....	4793, 17342	apparatus for correlative analysis of physiological processes, USSR study.....	10600
earthquakes and explosion seismology, USSR studies.....	16099	comparative, of temperature regulation, papers.....	13209
East European journals, abstracts.....	858, 1048, 1070, 2597, 2730, 2757, 2812, 2877, 2948, 5278, 5421, 6639, 6715, 6798, 6912, 7087, 8685, 8777, 8885, 10430, 10455, 10467, 10608, 10714, 10798, 10866, 12303, 12419, 12526, 12665, 14108, 14329, 14333, 14371, 15698, 15874, 16007, 16142, 17717, 17856, 17986, 19541, 19646, 19722, 20837, 20886.	electronic techniques of monitoring, fundamentals.....	20301
engineering, journal, translations, USSR.....	14103	electrophysiological index of brain neuron excitation, USSR study.....	6800
experimental and theoretical, theory of weak interactions (13 lectures).....	1820	human and animal blood, physiology in hot climates, USSR translation.....	19707
health, medical aspects of radiation accidents, handbook.....	11589	human and animal physiology, USSR study.....	19435
Hungarian, developments.....	12637	intracranial blood circulation and clinical implications.....	21011
journal of research, National Bureau of Standards.....	3815, 9203, 12894	journal (Ukrainian periodical), translations.....	10556
Latvian research.....	6791	labor and technical progress, USSR study.....	16230
major principles for general education, evaluation list.....	4826	new lines of development and their relation to cybernetics, USSR study.....	2918
mathematical, journal of research, National Bureau of Standards.....	3816, 9204, 18188	pathologic—	
meteors, symposium, proceedings, Aug. 28-Sept. 1, 1961.....	14693	of infectious process, USSR study.....	8550
Moscow State University 5-year program, analysis.....	8174	physiology and experimental therapy (USSR periodical).....	12310
physico-chemical state and metabolic path of radiocesium solutions, research study.....	4470	pathophysiology of higher nervous activity of man, conference on research methods, USSR.....	16177
physics of metals and metallography (USSR periodical), translations.....	6698	physiology and genetics, USSR studies.....	15752
reactor, use of heavy-water reactor for experimental work, USSR study.....	19651	plant physiology, new procedures in study, USSR study.....	19762
scientific tests, standards, publications price list.....	18281	sensory—	
snow as material.....	2190	excitation of secondary and inverted primary nystagmus from cat by unilateral caloric irrigation.....	16865
solid state physics (USSR periodical), translations.....	7063, 7114	manipulation of arousal and its effects on human vestibular nystagmus induced by caloric irrigation and angular accelerations.....	1849
sound in sea.....	19983	space physiology, experimental research.....	18181
Soviet and Chinese articles, English abstracts.....	3621	USSR studies.....	8698
space physics, studies.....	13199	Phytogeography, development problem, USSR study.....	8566
teachers, space science program, papers.....	19900	Phytoplankton, marine, preparation for microscopic examination and enumeration on molecular filters.....	6467
teaching in USSR, report for UNESCO.....	12656	PI series, Post Office Department.....	9325-26, 12971
USSR—		Piatt, V. R., atmosphere purification and control on nuclear-powered submarines, chemical research status.....	11185
engineering physics (periodical), translations.....	10747, 15968, 19594	Picatinny Arsenal, Dover, N.J., Feltman Research Laboratories technical report.....	7378
scientific abstracts.....	12767, 19683	Pickett, A. G., elastomeric materials used in aerospace systems.....	4391
translations.....	15672, 17808, 10744	Pickford, Gerald D., opportunities for timber production in Hawaii.....	2313
X-ray fundamentals.....	19818	Pienics, southern Appalachian sites, recreation impact.....	6525
see also Nuclear physics—Plasma—Radiophysics.			
Physiographic and hydraulic studies of rivers (series).....	15612		

# INDEX 1963

Entry	Entry
Pictures, <i>see</i> Paintings—Photographs.	Pilots and pilotage—Continued
Piece-rate and premium wage system	services on Great Lakes and St.
on state farms, USSR..... 2532	Lawrence River, agreement
Piedmont region:	with Canada..... 11320
forests, hydrologic properties of	<i>see also</i> Aircraft automatic pilots—
Cecil and Lloyd soil series..... 6519	Astronauts—Aviators—Ship
Georgia, management of small	pilots.
woodland holdings, 12 year re-	Piltz, Albert, science publications, an-
port..... 10247	notated guide to selected list-
southern, Cecil soils runoff and ero-	ings..... 13863
sion control studies..... 7584	Pima County, Ariz., open-pit copper
southern farms, soil conservation	mining and concentrating
methods..... 11450	methods and costs..... 9113
Virginia-Carolina, shortleaf pine,	Pinal County, Ariz.:
international $\frac{1}{4}$ -inch board-	cenozoic geology in Mammoth area..... 8332
foot volume table..... 6518	San Manuel Copper Corp., mining,
Pierce, E. C., Jr., effects of changes in	milling, smelting methods, er-
in blood $PCO_2$ on brain oxy-	rata..... 3053
genation..... 69	Pinal Creek:
Pierce, Harold B., blast loading on	flood control, engineer report—
airfoil in Mach number 0.7 air-	departmental edition..... 446
flow, experimental investiga-	document edition..... 249
tion..... 7263	Pinal Ranch quadrangle, Ariz., geol-
Pierce, Margaret H.:	ogy..... 15603
cases decided in Court of Claims—	Pinchot Institute for Conservation
June 1–July 1, 1960..... 8130	Studies, dedication, introduc-
Aug. 1–Dec. 31, 1960..... 15404	tory remarks..... 20292
Jan. 1–Mar. 31, 1961..... 17336	Pine:
Piercy, George T., testimony..... 2099	east side poles, growth response to
Pieroni, L. J., solid-fuel gasification	vegetation removal..... 12163
using nuclear heat..... 11563	eastern, annosus root rot..... 10210
Piers, permits for work in navigable	hard—
waters..... 4867	sweetfern rust infection..... 15551
Pietri, C. E., separation and deter-	variation in resistance to mouse
mination of plutonium in plu-	damage..... 10236
tonium-uranium fuel elements..... 5939	hybrids between eastern and west-
Piezoelectricity, substances, transis-	ern white pine, juvenile per-
torized control systems for in-	formance..... 10214
formation storage device,	jack—
USSR study..... 5211	botanical and commercial range
Pigeons:	in Lake States..... 15562
hunting, possession, transportation,	seed stored in cones, Minnesota..... 6514
importation, Federal regula-	loblolly—
tions, 1963–64..... 15535	basal area growth of natural
mourning dove status report, 1962..... 4972	standards..... 19264
<i>see also</i> Squabs.	inheritance of branch length in
Pigg, Leroy D., human engineering	young progeny..... 12181
principles of design for in-	Mississippi plantings for erosion
space maintenance..... 7599	control..... 20710
Pigments, iron oxides, minerals year-	lodgepole—
book chapter..... 18078	seed dispersal..... 19254
Pigs, <i>see</i> Swine.	specific gravity in Intermountain
Pikel'ner, S. B., magnetic field of	Region..... 571
Crab Nebula and its central	lumber industry, Mississippi..... 1469
star..... 1320	Michigan plantations, natural mor-
Piles and pile driving:	tality of Zimmerman moth..... 12172
frost heaving of piles, Fairbanks,	ornamental, procedures and equip-
Alaska..... 10278	ment for fumigating European
pressure-treated marine piles—	pine shoot moth..... 6493
Douglas fir..... 5961	plantations, returns per acre yield
southern pine..... 5962	profitable income..... 20202
steel piling, protective coatings,	ponderosa—
test results..... 13135	advance reproduction, logging
Piling, <i>see</i> Piles and pile driving.	damage..... 6485
Pillmore, C. L., geology of Nefsy Di-	Arizona and New Mexico—
vide quadrangle, Crook County,	estimating past diameters..... 17493
Wyo..... 8330	pole-size, taper table..... 17494
Pillowcases, current industrial re-	Black Hills—
ports..... 13296	immature stands, volume ta-
Pilot guides, <i>see</i> Coast pilots.	bles..... 17491
Pilot plants, explosives, propellants,	susceptibility to southwestern
and pyrotechnic safety..... 1373	dwarfmistletoe..... 17487
<i>see also</i> subjects.	growth, curves in Nebraska wind-
Pilots and pilotage:	breaks..... 4989
controlled simulation of rendezvous	repellents reduce deer browsing
between spacecraft and com-	on seedlings..... 19256
manded module having low	reproduction in relation to seed
thrust..... 7270	supply at Challenge Experi-
Great Lakes pilotage regulations,	mental Forest..... 1022
etc..... 11687	seed origin and size of planting
natural pilot model for flight pro-	stock..... 15574
cedency evaluation..... 18225–226	seedling establishment, effects of
	different grasses on..... 10227



# JANUARY-DECEMBER

	Entry		Entry
Pine—Continued		Pine—Continued	
ponderosa—continued		white—continued	
seedling mortality at Challenge		provenance study in southern Ap-	
Experimental Forest, effect of		palachians .....	12192
advance growth .....	19257	southern Appalachian planta-	
Southwest—		tions, site, volume, and yield ..	6524
estimating volumes and diam-		thinning fails to stimulate	
eters at breast height from		growth on 50-year-old planta-	
stump diameters .....	17495	tion .....	12166
heavy pruning reduces growth	17489	Pine Flat and Diamond Flat nickel-	
volume, taper, and related ta-		bearing laterite deposits, Del	
bles .....	15584	Norte County, Calif. ....	9132
thermogravimetric analysis, ef-		Pine Ridge Reservation, Ogiala Sioux	
fects of various chemicals .....	19266	Tribe, convey lands in trust to,	
uniformity among growth layers		reports .....	7915-16, 19036-37
in 3 specimens .....	5721	Pine shoot moths, see European pine	
ponderosa and Jeffrey—		shoot moths.	
insect-caused mortality, effects		Pink bollworms:	
of sanitation salvage cutting,		development and control, picture	
1938-59 .....	6500	sheet .....	18412
prototype fuel break .....	8297	kill with improved gin equipment.	13184
ponderosa and sugar—		Pinkerton Detective Agency, see De-	
grading defects in logs, guide ..	15553	etective agencies.	
grading saw logs in trees, im-		Pinnacles National Monument, gen-	
proved system .....	15558	eral information .....	7335
red—		Piñon, aerial volume tables for pin-	
cone production stimulated by		yon-juniper stands .....	4983
thinning .....	578	Pins, straight, office, Federal stand-	
cones, frost damage .....	6512	ard .....	19217
diameters and numbers of trees		Pinto Basin, hydrologic and geologic	
greatly affected by density,		reconnaissance .....	5028
age, and site .....	15567	Pinyon, see Piñon.	
healing time for pruning		Pioneer, see Satellites.	
wounds .....	15571	Pipe and pipe fittings:	
influence of regular spacing on		concrete and clay pipe, highway	
growth .....	15564	construction usage factors .....	20117
plantations—		engineered performance standards,	
crown weights .....	15566	pipefitting, plumbing hand-	
litter fuel .....	12179	book .....	1610
60-year old, growing stock den-		Federal item identification guides	
sity, progress report .....	579	for supply cataloging, supple-	
resins, volatility and vapor satura-		ment .....	3655
tion .....	19260	metal, with plastic lining, new	
shortleaf—		method, USSR .....	5346
bibliography .....	8303	production in USSR .....	14105
germination of treated seed .....	15576	sewerage utilities, sewer service	
international ¼-inch board-foot		pipe requirements .....	16872
volume tables, Virginia-Carol-		sharp-edged pipe junctions energy	
lina Piedmont .....	6518	loss in water, conveyance sys-	
seed fall, rates and dates .....	20695	tems .....	16766
volume tables, adjusting for dif-		water supply piping system, nur-	
ferent limits of top utiliza-		ing homes .....	13004
tion .....	567	Pipe lines:	
slash—		junction energy losses in water	
and longleaf, test of direct seed-		conveyance systems .....	16766
ing depths .....	12185	natural gas—	
cultivated plantation, fertiliza-		maps .....	507, 10162
tion .....	10246	sales by producers to pipeline	
growth and yield of plantations.	12191	companies, 1961 .....	8241
precommercial thinning .....	17496	oil—	
spacing-environmental relation-		transport statistics, 1961 .....	641
ships .....	8301	transportation revenue and traf-	
southern—		fle .....	4243
grading logs and trees .....	8304	Pipe Spring National Monument, gen-	
logs, overrun data .....	6523	eral information .....	3187
lumber grade yields .....	6522	Pipelines, see Pipe lines.	
pressure-treated marine plies ..	5962	Piper PA-25 Pawnee distribution	
tip moth damage in Florida plan-		patterns .....	18398
tations .....	17497	Pipestone National Monument, gen-	
western white—		eral information .....	5641
clonal variation, graftability ..	6486	Piranha, eradication in inland waters	
cones, insect-caused loss .....	572	of Brazil .....	13962
flower induction and stimulation.	18989	Pirsko, Arthur R., California's 1961	
growth stimulation by cultural		fire weather brings near-record	
treatment .....	17479	losses .....	6494
silvics .....	10212	Plassot, Henry J., forest resources of	
white—		western Montana .....	17502
eastern Tennessee, insects not		Pistols, see Shooting.	
cause of post-mergence		Piston gages, pressure measurements,	
chronic tipburn .....	12182	reduction of data .....	12898
forest overstory effects on micro-		Pistons, theory, for study of factors	
climate and related blister rust		affecting flutter characteristics	
spread .....	577	calculated for 2-swept wings ..	11067

# INDEX 1963

Entry	Entry
Pitch:	Planetary science, research in space exploration, papers----- 5542
binders for graphite, literature survey----- 14969	Planets:
hydrogenation from low-temperature carbonization of coal----- 3082	ephemerides, calculation from initial values----- 1277
Pitch (motion):	formation----- 21015
control, spinning vehicle during flight, test----- 14576	perturbations, computation----- 16394
sounding rocket, pitch-roll resonance conditions, steady-state and 6-degree-of-freedom analysis----- 12882	radiation belts, USSR study----- 6673
swept-wing heavy-bomber configuration, lateral forces and pitching moments, Mach number 1.61----- 14533	rotating, Z-function solutions for motion and heating during atmospheric entry from equatorial orbits----- 5583
wing-body combinations with wedge-shaped bodies located above and below 54.5° swept delta wing, aerodynamic characteristics----- 14565	soils, evaluation of infrared spectrophotometry for analysis----- 9189
Pits, <i>see</i> Quarries and quarrying.	solar flux incident for spectral region 50 Å to 3000 Å at top of atmospheres of earth----- 19891
Pittman, Steuart L.:	<i>see</i> Life on other planets-----
addresses-----	also names of planets.
Mar. 14, 1963----- 7776	Planimeters, area-elevation information, planimetry method for obtaining----- 8298
Mar. 19, 1963----- 6019	Planing-machines, pneumatic vibrating-blade planer, testing in phosphate and coal----- 3095
Pittman act, <i>see</i> Reclamation of land.	Planing mills, southern, industry wage survey----- 12807
Pittsburgh, Pa.:	Plankton:
area redevelopment manpower report----- 17401	distribution in Gulf of Tonkin and South China Sea, general characteristics----- 12575
consumer expenditures and income, 1960-----	masa Black Sea planktonic algae grown in cultures, protein, fat, carbohydrate, and ash content----- 17738
advance report----- 7155	oil films, stability to artificial sunlight----- 3226
supplement----- 14453	primary production of bodies of water----- 14959
electric facilities of area, map----- 516, 2266	<i>see also</i> Phytoplankton—Zooplankton.
Greater Pittsburgh Airport, weather observations, hourly, decennial census----- 11399	Planned training, your future security----- 9644
income, education, and unemployment in neighborhoods----- 10918	Planning (economics), <i>see</i> Business—Economic policy.
motor, carrier accident----- 8431	Planning (programming), <i>see</i> Programming (planning).
occupational wage survey—departmental edition----- 12792	Planning a visit to Nation's Capital?----- 11219
document edition----- 11736	Planning for later years----- 21112
Pittsburgh coal, <i>see</i> Coal.	Planning on going into business?----- 20085
Pittwood, Ill., railroad accident----- 8435	Planning your retirement, guide for Department of Agriculture employees----- 16751
Pituitary gland:	Plans, <i>see</i> Architecture.
changes in anterior lobe of hypophysis during irradiation and cooling, USSR study----- 15671	Plans for visiting professional----- 13022
use of materials to spawn warm-water fishes----- 2298	Plant diseases, <i>see</i> Diseases of plants.
PL 480 newsletter----- 3866	Plant lice, sweetclover aphids, sources of resistance in species of <i>Melilotus</i> ----- 18393
Placak, O. R., final off-site radiological safety report, Project Sedan----- 11569	Plant nematodes----- 1622
Place to live, yearbook of agriculture, 1963:	Plant Pest Control Division, activities, functions, and background information----- 11439
departmental edition----- 20291	Plant pest control inspectors, examination announcement----- 1947
document edition----- 20452	Plant pests, <i>see</i> Pests.
Placement:	Plant Quarantine Division, summary of activities, 1962----- 1641
cooperation of College Placement Association and U.S. Employment Service (remarks)----- 17405	Plant quarantine inspectors, examination announcement----- 1947
mentally retarded, guide to jobs----- 14448	Planting, spring, publications, list----- 7392
professional personnel----- 6355	<i>see also</i> Forest planting—Tree planting.
selective, hiring handicapped according to abilities----- 18735	Plantings, <i>see</i> Crops.
VRA, 15th annual workshop, proceedings----- 9483	Plants:
VRA workshops, proceedings dealing with small business enterprises----- 16644	classification bulletin----- 16477
<i>see also</i> Child placing.	deer browse, southern forests----- 4980
Plague, immunogenic properties of some fractions of causative agents, USSR study----- 17682	effects of light, literature review, 1950----- 7540
Plan for the man, tool to unleash creativity and potential in National Park Service----- 7336	explorations, ornamentals in Netherlands, West Germany and Belgium----- 11432
Plane coordinates, <i>see</i> Coordinates.	
Plane sense, general aviation information----- 20689	
Planetary aeronomy, <i>see</i> Aeronomy.	

	Entry
Plants—Continued	
forest, common native and introduced in Hawaii provisional check list	12161
forest geography of China	14294
growing, abstracts pertaining to Communist China in Soviet journals	19554
house—	
insects and related pests, how to control	14858
selecting and growing	7567
humidity regulation, effect of automatism from standpoint of cybernetics, USSR study	7020
Moscow, changes in fungal flora over a 15-year period	996
nature of heterosis and methods of its utilization in selection, USSR study	8692
nursery products, production and sales, 1961 and 1962	14736
physiology, new procedures in study, USSR study	19762
plants, plant products and plant pest carriers, requirements for interstate movement, guide	5802
protection, proceedings and results of meeting of coordinating council for protection of agricultural crops, USSR	1013
publications, price list	11223
quarantine—	
notices under plant quarantine act, P.P.C. series	4000
proposed amendment, hearings	6182
quarantine, import requirements—	
Australia	5803
Belgium	9550
British Honduras	11413
Fiji	1652
Finland	5804
foreign countries, list	9545
France	4344
Guatemala	9551
Indonesia	1654
Luxembourg	4345
Seychelles	13160
Turkey	9552
rare and trace elements, determination	18510
research, large cage design	9539
tissue culture research, status and prospects, Chinese study	17917
transpiration research, 1961	9587
White Oak Lake bed, Oak Ridge, Tenn., chemical and physical data	1836
woods and flora of Florida Keys, Capparaceae	21041
see also Annuals (plants)—Aquatic plants—Brush—Diseases of plants—Phreatophytes—Poisonous plants—also names of plants.	
Plants (industrial):	
construction, conversion, etc., financing through SBA loans to State and local development companies	11269
dairy and multipurpose milk, layouts and operating criteria for automation	16746
metallurgical, USSR, level of mechanization and automation, inadequate	10651
modernization as route to economic growth (address)	18631
new, manufacturers expenditures	7745
plant laboratory (USSR periodical), metallurgical reports	10590
processing, bulk handling and shipping potatoes to	18432

	Entry
Plants (industrial)—Continued	
safeguarding classified information, industrial security manual	4796
site selection for small manufacturing firms	1455
small manufacturing, personal factors in choosing site	1461
Soviet solving problems of intra-plant planning	10711
under USDA inspection, processed fruits, vegetables, etc., list	13137
supplement	7530
see also types of industrial plants.	
Plants, Fossil, paleontological description of Ch'i-lieu Mountains, Communist China study	14279
Plasma:	
afterglows with application in nitrogen, investigation	21008
cold multiconstituent, resonance at arbitrary orientation to magnetic field	16391
collision frequencies proportional to energy in radio wave reflection and transmission process	9211
diode, effects at cathode as model of magnetogaa dynamic energy conversions, USSR study	12498
direct-current low-pressure source, experimental evaluation	9166
flows, low-density, direct velocity measurements	11060
interior, partition function of atom, mathematical treatment of problem of determining eigenvalues	20977
interplanetary, observed phenomena, experiments, etc.	19919
magnetically compressed, use in stellarator	7700
motion of idealized plasma ring through travelling-magnetic-wave plasma accelerators	11031
one-dimensional, instabilities	7701
one-dimensional model, some computer experiments	18576
physics and controlled nuclear fusion research, conference proceedings, Salzburg, Sept. 4-9, 1961	14958
physics, and magnetohydrodynamics—	
bibliography	4439
in space exploration, papers	7235
rarefied, magnetic field of line current in transverse stream	5582
sheath near plane electrode bounding collisionless plasma in magnetic field	19936
sheaths, instability in high density rf induction discharge, study	11177
sprayed materials, particle-substrate bonding, preliminary investigation	18136
thermal, dispersion and damping of longitudinal electron oscillations	12867
Plasma (blood), see Blood.	
Plasma cells, significance in antibody formation process during ionizing radiation, USSR study	7073
Plasma Physics Laboratory, quarterly report	1832
Plasmatrons, see Duoplasmatron.	
Plass, William T., preplanting treatments for brushy old fields in southern Illinois	13986
PLASTEC notes	347, 10044, 15409
PLASTEC reports	348, 2118, 17352

# INDEX 1963

Entry	Entry
Plastic coating: reinforced for protection of steel surfaces ----- 3322	Plates (metal, etc.)—Continued flat—continued
scribing on coated plastics, tech- niques ----- 1731	pressures and turbulent heat- transfer coefficients associated with sinusoidal protuberances at Mach no. 3 ----- 9161
Plasticity, isostatic deformation of Lake Bonneville ----- 20736	flexible, theory, survey of investi- gations, 1941-57 ----- 21012
Plastics:—	high-manganese semikilled steel, mechanical properties ----- 9379
agglutinating, and free-swelling properties of American coals ----- 7204	steel, effect of metallurgical vari- ables on transition tempera- tures in drop-weight and Charpy V-notch tests ----- 5715
coated, scribing applications, tech- niques ----- 1731	stiffened, torsional rigidity measure- ments ----- 16411
compression, friction with liquid lubricants ----- 20015	thin flat plate of finite dimensions, determining elastic state of thermal stress ----- 18140
compression under fluctuating loads ----- 20015	waffle, symmetric, structural syn- thesis ----- 3162
defense engineering materials and applications, Government spec- ifications and standards ----- 15409	<i>see also</i> names of metals, etc., of which plates are made.
directory of knowledgeable Govern- ment personnel ----- 17352	Platform scales to 2000 pounds (min- imum graduation not less than 1 ounce) ----- 3239
effect of insect repellents ----- 1623	Plating, vapor plating of aluminum on steel ----- 20298
evaluation of use in experimental resection of liver ----- 2496	<i>see also</i> Cadmium.
foamed—	Platinum:
on base of organosilicon resins and their combinations with organic polymers ----- 18511	metals report, mineral industry sur- vey, quarterly ----- 4020
use for self-erecting structures for space antennas ----- 7267	platinum-group metals—
glass fiber reinforced, USSR study ----- 12479	minerals yearbook chapter ----- 18090
glass, USSR study ----- 10591	1962 ----- 10942
health hazards and toxicity, bibliog- raphy ----- 347	tube, method for oxygen determina- tion for fluorine-containing compounds ----- 18706
laminated, future for cotton ----- 14871	Platt National Park, general infor- mation ----- 12929
laminates, interlaminar properties materials industry, outlook for 1963 and review of 1962 ----- 4534	Platte County, Wyo., Fort Laramie area, geology ----- 10294
meat handling equipment, construc- tion ----- 13159	Platte River and Valley, water sup- ply outlook and snow surveys of drainage basins ----- 4285
organic coating using fluidized bed technique ----- 20014	Platteville quadrangle, Wis., geology ----- 17522
PLASTEC notes ----- 347, 10044, 15409	Playgrounds, America's, national for- ests, skiing ----- 39
PLASTEC reports ----- 348, 2118, 17352	Plays, <i>see</i> Drama.
products made in metal molds, pro- duction adaptability ----- 7644	Pledge of allegiance to flag, song, print additional copies, report ----- 15366
reflectivity reduction from trans- parent materials applicable to plastic helicopter canopies, techniques evaluation ----- 2118	Plimpton, James D., large angle pair production ----- 125
reinforced—	Plotters, <i>see</i> atron tubes.
defense specifications and stand- ards ----- 10044	Plotting positions for logarithmic- normal frequency studies ----- 18397
feasibility for primary structure of Army aircraft ----- 9467	Plowing, <i>see</i> Tillage.
shipments of selected products, 1961, current industrial re- ports ----- 15067	Plowman, E. Grosvenor:
space environment effects, summary with bibliography ----- 348	addresses, etc—
technical conference papers, subject index, bibliography and code description ----- 1873, 17353	Mar. 21, 1963 ----- 7813
tools as manufacturing aids, fabri- cation and utilization ----- 11198	May 9, 1963 ----- 9792
U.S. production and sales, prelimi- nary report ----- 4032	May 16, 1963 ----- 9787
USSR conference ----- 15670	June 27, 1963 ----- 13349
USSR industry development ----- 14121	Sept. 26, 1963 ----- 18753
weight loss rates in vacuum at tem- peratures from 80° to 500° F. ----- 1273	Oct. 11, 1963 ----- 18750
working conditions, tool-metal in- terface, boundary conditions research ----- 20015	Plows, disk, operation, care, etc ----- 16736
<i>see also</i> Textolite.	Plowshare Program (nuclear test ef- fects) ----- 4494
Plastics Technical Evaluation Center:	Plowshare program (use of nuclear detonations for peaceful uses) ----- 11569-580, 14994-996, 16853, 18585
PLASTEC notes ----- 347, 10044, 15409	Plum Brook reactor, <i>see</i> Reactors (atomic).
PLASTEC reports ----- 348, 2118, 17352	Plum Island Animal Disease Labora- tory, research on foreign dis- eases of animals ----- 14878
Plates (metal, etc.):	Plumb, T. R., four tests of broadcast spraying in killing 1st-year chamise sprouts ----- 10228
flat—	Plumbers' supplies:
flutter of low-aspect-ratio sur- faces at Mach numbers from 0.62 to 3.00 ----- 21002	fixtures, enameled cast iron, stand- ard of trade ----- 16869

# JANUARY-DECEMBER

	Entry
Plumbers' supplies—Continued	
plumbing fixtures, current industrial reports.....	1893, 3575
summary 1962.....	16899
Plumbing:	
cross-connections, hazards in household and community water supply systems.....	14678
engineered performance standards, pipefitting, plumbing handbook.....	1610
equipment, Federal item identification guides for supply cataloging, supplement.....	3655
nursing homes, environmental health factors.....	13003
Plumbing fixtures, <i>see</i> Plumbing supplies.	
Plumbing supplies, convection stack, device for ridding pit toilets of bad odor.....	10218
Plums, production, use, value, by States, 1961-62.....	16615
Plunkett Foundation for Cooperative Studies, overseas co-op courses	8208
Plutonium:	
fabricated alpha sources, guide for preparation of license applications.....	15019
license applications for plutonium-beryllium neutron sources—uses other than well logging, guide for preparation.....	15020
well logging, guide for preparation.....	15021
separation and determination in plutonium-uranium fuel elements by cation exchange.....	5939
Soviet experiments with plutonium-239, articles.....	2708
uranium fuel elements, separation and determination of plutonium by cation exchange.....	5939
Plutonium carbides, fast reactor fuel, study of PuC-UC.....	1829
Plutonium oxides:	
fast reactor fuel, study of PuO <sub>2</sub> -UO <sub>2</sub> .....	1829
PuO <sub>2</sub> -UO <sub>2</sub> fast reactor fuel post-irradiation examination.....	123
Plymouth, Mass.:	
harbor, engineer report—departmental edition.....	447
document edition.....	319
Plywood:	
Douglas fir, standard of trade, amdt.....	4511, 5958
Federal item identification guides for supply cataloging, supplement.....	3655
hardwood, current industrial reports.....	13292
softwood—current industrial reports.....	15068
industry, outlook for 1963 and review of 1962.....	4551
western, standard of trade, amdt.....	4512, 5959
PM nuclear power plant research and development program, <i>see</i> Nuclear reactor power plants.	
PMS series, <i>see</i> Personnel methods series.	
Pneumatic drills, <i>see</i> Drills (tools).	
Pneumatic systems, <i>see</i> Compressed air.	
Pneumocirculation, <i>see</i> Circulation.	
Pneumoconiosis, hygienic significance of natural radioactivity in mining and concentrating of rare metal ores as factor in development, USSR study.....	14268
Pneumographs, electrical impedance, thoracic cage measurements.....	16801
Poage, Bob, around world, with report on recent trip.....	2046
Poats, Frederick J., appraisal of treated burlap bags for shipping wool.....	12048
Pocahontas coal, <i>see</i> Coal.	
Pocket guides:	
Portugal.....	98
Vietnam.....	4436
Pocket pen flares, <i>see</i> Flares.	
Pocosins, vegetation, seasonal moisture fluctuations.....	10245
Pocs, Konstantin, evaluation of modification to antenna of Rawin set AN/GMD-2.....	5877
Podany, Joseph C., tomato prices and market structure in lower Rio Grande Valley of Tex.....	9577
Podgor, S., J-values of s-type neutron resonances by multiple scattering.....	12955
Podolsk microwire plant, USSR.....	2781
Pohl, L. E., sodium mass transfer, corrosion sample data 1962.....	18570
Point Arguello Naval Missile Facility, geology and ground-water features.....	6565
Point Conception, Calif., to Mexican border, coastal warning facilities chart, 1963.....	9491
Point Judith, R.I.:	
harbor improvements and hurricane survey, engineer report—departmental edition.....	448
document edition.....	253
Point Reyes National Seashore, general information.....	1354
Poison ivy, oak, sumac, identification, precautions, eradication.....	9568
Poisonous plants, Western States, description, etc.....	14856
<i>see also</i> names of toxic plants.	
Poisonous snakes of world, manual for use by U.S. amphibious forces.....	16454
Poisons:	
antifouling paints, USSR studies.....	17675
Bulgaria, production, sale, storage, etc., regulations.....	5286
economic, emergency information for treating.....	16493
economic, labeling and registration—hearings.....	18917, 19041
report.....	19034
intoxication by pesticides, clinical picture and therapy, USSR study.....	17669
National Clearinghouse for Poison Control Centers bulletins.....	3937
protect your family against poisoning.....	8287
toxicity of plastics, bibliography— <i>see also</i> names of poisons.	347
Poisson equation, axially symmetric, theory and application to ion-thruster analysis, numerical solution.....	12859
Poland:	
agricultural commodities, agreement.....	16583
around world with Bob Poage, report on recent trip to.....	2046
biological institutes, Bulgarian report.....	2698
Communist Party, truth about decentralization.....	15902
East European legal journals, abstracts.....	959
educational systems.....	6331
Gomulka's reaction to Witold Jedlicki's article Churks and kikes, author's glossary.....	8807



# INDEX 1963

	Entry		Entry
Poland—Continued		Political rights of women, <i>see</i> Women.	
higher education, organization and administration.....	8189	Political science:	
legal journals, abstracts.....	5246,	political behavior, list of current	21119
8736, 10694, 12592, 15732,	17597	studies.....	20086
patents, abstracts, translations.....	11601,	publications, list.....	20086
15031, 18634, 20340		Politics:	
power engineering, increasing capacity.....	2704	Communist China, translations.....	783,
provincial press, summaries.....	662,	806, 962, 1034, 1100, 2502, 2526,	
755, 869, 917, 1098, 1143, 2018,		2555, 2572, 2636, 2851, 2884,	
2743, 2861, 2905, 2987, 5253,		2899, 2923, 2992, 5127, 5187,	
6705, 6763, 6922-23, 7080, 8534,		5222, 5232, 5321, 5327, 5338,	
8649, 8797, 8952, 10404, 10499,		5363, 5414, 6089, 6718, 6743,	
10642, 10733, 12282, 12338,		6815, 6838, 6845, 6929, 6936,	
12539, 12599, 12750, 14143,		6998, 7025, 7047, 7069, 7131,	
14251, 14340, 14383, 15707,		8517, 8642, 8667, 8703, 8727,	
15890, 15969, 16062, 16152,		8732, 8752, 8813, 8829, 8833,	
17649, 17720, 17793, 17926,		8894, 8915, 8956, 8977, 10840,	
17961, 19499, 19574, 19622,		10876, 12468, 12640, 12736,	
19740, 20831.		12755, 14153, 14206, 14233,	
school system, survey.....	862	14250, 14382, 14423, 14426,	
science, long range plans for development.....	8515	15748, 15759, 15929, 15960,	
scientific research, need for coordination.....	8483	16073, 17631, 17801, 17959,	
visas, waiving of fees for performing artists and groups, agreement.....	9429	19376, 19561, 19641, 19674,	
Polar regions, <i>see</i> Antarctic regions—		19681, 19757, 19765, 20822,	
Arctic regions.		20855, 20895.	
Polar semiconductors, <i>see</i> Semiconductors.		Eastern Europe, translations.....	784,
Polaris (missile), <i>see</i> Missiles.		809, 824, 972, 981, 1036, 1126,	
Polaris (star), <i>see</i> Pole star.		2576, 2619, 2697, 2717, 2773,	
Polarizabilities, <i>see</i> Atomic polarizabilities.		2854, 2863, 2940, 5108, 5128,	
Polarization (light):		5256, 5290, 5379, 5411, 6837,	
Arctic meteorology photo probe.....	16364	6917, 6985, 7090, 8472, 8547,	
Pole star, ephemeris, 1964.....	14486	8621, 8670, 8795, 8904, 8927,	
Polhamus, Edward C., effects of camber, etc., on aerodynamic characteristics of parawings.....	3118	10372, 10444, 10497, 10585,	
Poll, Adon, long-term production prospects for western agriculture.....	13838	10660, 10690, 10704, 10732,	
Police:		10805, 10873, 12277, 12350,	
children, police work with, perspectives and principles.....	175	12456, 12540, 12725, 12762,	
college and universities offering 2- and 4-year programs in policing, list.....	1926	14197, 14380, 14391, 15769,	
District of Columbia—		15902, 15952, 16008, 16086,	
Police Department, examination announcements—		17688, 17833, 17851, 19416,	
policeman.....	7785	19556, 19672, 19695, 19729,	
policeman, amdt.....	6023	20806.	
policewoman.....	9746	development of socialist Slovakia (speech).....	2536
policewoman, amdt.....	6024	information on leading Jordanian politicians, translations.....	10719
report motor vehicle collisions to police, report.....	6158	Italy, current situation.....	10436
metropolitan police force canine corps, expand, report.....	6156	Korea, developments in last decade.....	19729
salary trends, 1924-61.....	1162	Mongolia, political information.....	5221
short-term juvenile problem institutes, list.....	1926	North Korea, translations.....	675,
United States Park Police, appointments, age limits, reports.....	8064, 9877	709, 2538, 2903, 2909, 8461,	
Poliomyelitis:		8587, 8644, 12426, 15959, 16115,	
biochemical changes, USSR study.....	15932	16187, 16202, 17925, 20864.	
fact sheet.....	7401	North Vietnam, translations.....	645,
infantile paralysis, health information series.....	16501	710, 927, 1059, 1147, 2700, 2750,	
Polistes, <i>see</i> Wasps.		2787, 2991, 5322, 6736, 6919,	
Political activities, <i>see</i> Politics.		7019, 7104, 8498, 8839, 10373,	
Political and legal research (Chinese periodical):		10695, 10849, 10872, 12391,	
translations.....	8816	12482, 12620, 14150, 14232,	
Political campaigns, <i>see</i> Elections.		14313, 14336, 14363, 15682,	
Political economy, <i>see</i> Economics.		15722, 15832, 15999, 16067,	
Political parties, France and Italy, social bases.....	12435	16210, 19408, 19605, 20792,	
		20891.	
		political activity—	
		Federal employees, rules.....	7787
		Federal officers and employees restrictions under Hatch act.....	9755
		Syria, political personalities, biographic information.....	2735
		two kinds of politics, domestic and international (address).....	14710
		<i>see also</i> International relations.	
		Pollard, A. J.:	
		effects of alkaline phosphate solutions at elevated temperatures on compounds prepared at room temperature.....	11185
		high-vanadium oil-ash deposits in naval boilers.....	11182
		Pollination, <i>see</i> Fertilization of plants.	

# JANUARY-DECEMBER

Entry	Entry
Pollock, Josephine, cooperative extension service work with low income families in low rent public housing.....	20662
Pollution of air, <i>see</i> Air pollution.	
Pollution of streams, <i>see</i> Water pollution.	
Pollution of water, <i>see</i> Water pollution.	
Polomik, E., multi-rod burnout at high pressure.....	11555
Polybutenes, miticides, evaluation.....	1624
Polychaeta, New England region, marine polychaete worms, families Aphroditidae through Trochochaetidae.....	21040
Polyelectrolytes, solution, potential and effective diffusion constant, calculations.....	14602
Polyethylene:	
bags, filling with citrus fruit.....	13146
frictional properties.....	14633
Polyethylene glycol, treatment of wood, notes.....	12171
Polygraphy, Library of Congress classification.....	9086
Polymerization, <i>see</i> Polymers and polymerization.	
Polymers and polymerization:	
copolymerization and polymerization of unsaturated fatty acids and their esters.....	16714
dilute solution properties of poly (n-octyl) methacrylate.....	7387
electron parametric spectra arising after mechanical and thermal processing of natural cystine-containing polymers, USSR study.....	19587
films for saline water conversion, investigation.....	8369
frictional properties of polyethylenes and perfluorocarbon polymers.....	14633
heat-resistant paramagnetic polymer, obtaining.....	18514
iodine, high polymer compounds, germicidal and therapeutic properties, USSR study.....	785
polymeric therapeutic compounds, USSR study.....	20772
polymers—	
and machines, USSR studies.....	10604
high, photodegradation.....	11191
organic, bibliography.....	1871
organic foamed plastics on base of organosilicon resins and combinations with.....	18511
with inorganic main chains, USSR studies.....	15906
poly-Schiff bases, preparation, etc., USSR study.....	20865
radiation-induced polymerization and graft copolymerization international symposium, proceedings.....	136
radiation polymerization, USSR news.....	10569
silicone polymers production recent developments, USSR study.....	19449
thin-film polymeric materials, calculation of energy deposition.....	19938
USSR industrial development, translations polyisoprene synthetic rubbers, equipment.....	17584
Polymethyl acrylate, photolysis in vacuum and in air.....	11191
Polyorganosiloxanes.....	877
Polyphenyl, radiolysis products, analysis by gas chromatography and other methods.....	5948
Polyphosphates, <i>see</i> Sodium polyphosphates.	
Polyps, hydroid, cell multiplication and growth, USSR study.....	8652
Polytetrafluoroethylene:	
ablation of blunt body to Mach number of 13.1.....	1297
frictional properties.....	14633
resin flexible hose, wire braid reinforced, standard of trade.....	1858
resin sheet, voluntary standard of trade.....	5960
teflon, capacitors, metallized, etc.....	9601
TFE fluorocarbon resin—	
electrical insulating tubing, standard of trade.....	13260
molded basic shapes, standard of trade.....	15027
Polyvinyl, use for thoracic surgery.....	18613
Pomegranates, production, use, value, by States, 1961-62.....	19391
Pommer, Alfred M., dual acidity and structure of H-montmorillonite.....	16615
Ponce, P.R., census of housing, 1960, metropolitan housing, tenure, rooms, condition and plumbing, etc.....	14023
Ponderosa pine, <i>see</i> Pine.	
Ponds, <i>see</i> Farm ponds.	
Pong, W. Y., change of grade and volume of Douglas-fir shop and better lumber during kiln drying.....	15080, 18646
Pong Yong Jin, relief.....	2315
Pontoons, Federal item identification guides for supply cataloging, supplement.....	9855, 16987, 17229
Pooling:	
cotton allotments of Billie Sol Estes, Agriculture Dept. handling, hearings.....	3660
errata.....	330
feeder cattle, improved marketing through grading and commingling.....	4780
feeder pig, improved marketing, etc.....	1702
small business, for defense production, and research and development.....	4357
veal calf, improved marketing through grading and commingling.....	11279
Pools, recreation, at Cochiti Reservoir, make water available, report.....	16747
Popecorn, 1962 production down 12 percent.....	11997
Pope, Robert B., construction aerial photo stand volume tables.....	9447
Poplar:	
hybrid—	
growth poor on acid spoil banks in West Virginia.....	6492
Ohio spoil banks.....	
Poppy plant, limitation of cultivation, protocol.....	20700
Population:	
census, amend U.S. Code relative to duties of enumerators—	15559
hearing.....	8007
report.....	11834
census, 1960—	
advance reports.....	3505
birthplace and country of origin, U.S. data.....	1876
characteristics of population.....	11605-
613, 13274-279, 15039-46, 16882-886, 18647-668, 20348-349.	
detailed characteristics—	
families, fertility, etc., 1920-21, United States summary.....	9731
educational attainment of population of U.S.....	1884

# INDEX 1963

Population—Continued	
census, 1960—continued	
employment status	1883
employment status and work experience	18705
enumeration time and cost study	16909
fertility	7747
final reports	11639-640,
13307, 15083-86, 16908, 18700-705, 20363.	
subject reports, announcement and order form	16876
industry group by occupation	155
inmates of institutions, social and economic data	15085
marital status	1886
migration, lifetime and recent	16908
mobility, by age	1878
mobility for States and State economic areas	20363
nonwhite by race, social and economic statistics	18702
occupation by industry	11640
persons of Spanish surname	18701
places of work and means of transportation to work	4576
Puerto Rico, social and economic characteristics	1882
school enrollment of United States	1877
standard metropolitan statistical areas—	
final reports, announcement and order form	16875
social and economic data	18700
State economic areas, final reports, announcement and order form	16875
State of birth	18307
supplementary reports	155,
1876-86, 4575-76, 7747	
veterans in United States	1879
census publications, price list	9334
components of change, 1950 to 1960, counties, standard metropolitan statistical areas, etc.	1898
control, reproduction aspects, relevant to problems, scientific research, survey	5627, 18198
current population reports	1898,
4587	
announcement and order form	9724
consumer buying intentions, series	6003, 11635, 16900
consumer income, series	6002, 20359
population characteristics, series	4585-86,
7761-62, 9724, 15071, 18687-888	
population estimates, series	160-161,
1896-97, 4588-89, 5998, 7763,	
11631-633, 13299-300, 15072-73,	
18689-692.	
special censuses series	162-168,
1899, 4590-91, 5999-6001, 9725-26, 11634, 15074-78, 18693-697	
current survey—	
methodology, report	11636
reinterview program	7768
farm—	
estimates, Apr. 1962	6004
series Census ERS	6004
general social and economic characteristics, 1960 census advance reports	3505
growth, world problem, statement of U.S. policy	5727
Indonesia, Malaya, and the Philippines	14201
international statistics reports	6006
mobility for metropolitan areas	18703
nonwhite, housing, changes between 1950 and 1960	14041

Population—Continued		Entry
problems connected with statistical definition of urban and rural population		8583
problems, study—		
Asia	296	
manpower in U.S.	296	
United States	296	
world	296	
projections to 1976 and 2000	3250	
residing within 50 miles of selected points, 1960	7765	
rural, facts and trends (papers)	2259	
special censuses conducted by Bureau of Census, Jan. 1-Mar. 31, 1963	9726	
States and Puerto Rico, estimates	11633,	
18691		
States and selected outlying areas—		
estimates, July 1, 1962	18690	
provisional estimates, July 1, 1962	1896	
U.S., estimates July 1, 1961 and 1960	161	
trends—		
national, 1790-1960	5039	
national and State, 1950-1960-1970	9505	
United States—		
estimates	160,	
1897, 4588-89, 5998, 7763	11631-	
632, 13299, 15072-73, 18689,		
18692.		
recent trends, rural areas, etc.	4803	
single-year-of-age data, 1960	1880	
zones of equal population, 1960	20360	
see also names of States, etc.		
Porcupines:		
economic status and control	560	
winter feeding activity in merchantable stands of northern hardwood	15563	
Pork:		
and its products, cook thoroughly, products, cured, smoked, etc., institutional meat purchase specifications approved by USDA	16706	
slaughtering, cutting, and processing on farm	7564	
Porosity—		
and bulk density of sedimentary rocks	17525	
unsteady-state gas flow in consolidated porous media, laboratory test method	10872	
Porous materials, thermal diffusion of gases in porous media, negative concentration effect, USSR study	8539	
Port Arthur, Tex.:		
hurricane survey, engineer report—		
departmental edition	449	
document edition	243	
occupational wage survey—		
departmental edition	16278	
document edition	15169	
Port Sutton Channel:		
Tampa Harbor, Fla., engineer report—		
departmental edition	450	
document edition	256	
Portable recirculation system for fumigating bulk products in freight cars	13172	
Portage, Ind., population, special census	168	
Porte, William S., commercial production of tomatoes	4349	
Porter, H. C., Fairfax County, Va., soil survey	13051	

# JANUARY-DECEMBER

	Entry
<b>Portland, Maine:</b>	
City Airport, weather observations, hourly, summary, decennial census	20237
consumer expenditures and income, 1960	14454
advance report	7158
occupational wage survey—	
departmental edition	9054
document edition	7837
<b>Portland, Oreg.:</b>	
and adjacent areas, geology	14015
electric facilities of area, map	519
occupational wage survey—	
departmental edition	16284
document edition	15175
principal electric facilities of area, map	2266
relocation of elderly people, hearings	6287
west-side business district, problems of utilizing ground water	5038
<b>Portland cement, see Cement.</b>	
<b>Ports:</b>	
customs code classification, schedule D	11641
foreign, code classification, schedule K, changes	169
port series	2215, 10089
trade expansion program and port growth (address)	204
United States seaports, Atlantic coast	19817
see also Harbors—also names of ports, or places where located.	
<b>Portsmouth, Va.:</b>	
occupational wage survey—	
departmental edition	16286
document edition	15177
<b>Portugal:</b>	
agricultural commodities, agreement	16612
creation of new judicial districts	5391
fishing industry, 1962	19234
pocket guide	98
protocol for accession of agreement to GATT	9413
west coast, sailing directions, change	14619
<b>Portuguese man-of-war, ecological forms, distribution in northern Pacific Ocean, USSR study</b>	5311
<b>Position classification, see Classification—Job analysis.</b>	
<b>Position-classification standards</b>	4022
<b>Positrons:</b>	
and electrons interaction at high energies, USSR study	7055
positron-hydrogen scattering, theory	16386
<b>Possessions of United States, see Outlying possessions.</b>	
<b>Post Office and Civil Service Committee, House:</b>	
calendar	3841
committee prints	13666, 20503
hearings	8005-8, 9945-48, 11910-913, 13665, 15326-329, 17178-182, 18957, 20502, 20504.
investigations and studies—	
authorization, report	4736
expenses, report	6130
reports	7950-54, 9883, 11802, 11834, 11837, 11841, 13532, 15241, 15264-265, 15274, 18867, 18912.
<b>Post Office and Civil Service Committee, Senate:</b>	
calendar	3859

	Entry
clerical assistant, employment, reports	4770, 6265
committee print	336
hearings	10022-23, 13819-820, 15401, 17329, 19067, 20613.
investigations and studies—	
authorization, report	6266
postal service and civil service, authorization, report	4769
reports	4769-70, 11994, 11998, 13748, 17282
<b>Post Office Department:</b>	
agreement with American Federation of Labor and Congress of Industrial Organizations	9324
annual report, 1962—	
departmental edition	3256
document edition	2024
appropriations, 1964	
hearings	7984, 9997
law	13413
reports	7941, 9983, 11814
appropriations, suspension of restrictions on withdrawal from Treasury—	
hearings	13819
law	13425
reports	13532, 13748
directory of international mail	5671
domestic air mail transportation system, map	5672
efficiency and economy in methods of transporting money—	
hearing	2050
report	7967
equal employment	11207
furnishing utilities for certain vending machines operated by employees, GAO review	8319
general releases	4083
inspection service, work	9325
lock boxes, procurement, GAO review	2329
mail fraud inspection program (remarks)	21073
medical frauds, program for dealing with (remarks)	20023
methods handbook M series	12970
modernization programs (remarks)	20024
Montgomery Blair, Postmaster General	11208
philatelic releases	4083
postal manual, issues	4025
chap. 1 & 2	4026
chap. 3 & 7	4027
posters, commemorative stamps	1385-87, 3254, 7386-88, 11202-205, 12969, 14642-645, 16482-483, 18267-269, 20020-22, 21069.
<b>Postmaster General, nomination of John A. Gronouski, hearing</b>	19067
<b>public information service PI series</b>	9325-26, 12971
<b>publications, list</b>	21077
<b>real estate program relating to leasing of major facilities under long-term leases, GAO review</b>	2331
<b>research, development and mechanization</b>	5673
<b>special report, fiscal year 1963</b>	16486
<b>transportation of mail by railroad companies, railway post office requirements, contracting practices, etc., GAO review</b>	19286
<b>ZIP code and other innovations, evaluation (address)</b>	21068
<b>Post Office Department Advisory Board, supplementary report on equal employment opportunity in Post Office Dept.</b>	11207

# INDEX 1963

	Entry		Entry
Post offices:		Postage stamps—Continued	
directory—		5-cent Battle of Gettysburg	
by States and counties, 1963....	16484	(poster).....	14642
1963, (with ZIP code numbers)....	14646	5-cent Carolina Charter (poster)....	7387
manual, issues.....	4025	5-cent Christmas (poster).....	20020
chap. 1 and 2.....	4026	5-cent city mail delivery (post-	
chap. 3 and 7.....	4027	er).....	20021
personnel handbook.....	4023	5-cent Cordell Hull (poster).....	18267
receipts and classes.....	1388	5-cent Eleanor Roosevelt (post-	
stations, substations, or branches,		er).....	18268
increase area for establishing—		5-cent Emancipation Proclama-	
hearing.....	17180	tion (poster).....	14643
report.....	15274	5-cent food for peace, freedom	
ZIP code directories—		from hunger (poster).....	11203
Alabama.....	20025	5-cent George Washington, in	
Alaska.....	20026	sheet, coll, and booklet form	
Arizona.....	20027	(poster).....	1386
Arkansas.....	20028	5-cent International Red Cross	
California.....	20029	(poster).....	20022
Colorado.....	20030	5-cent John James Audubon	
Connecticut.....	20031	(poster).....	21069
Delaware.....	20032	5-cent science (poster).....	18269
Florida.....	20033	5-cent West Virginia statehood	
Georgia.....	20034	(poster).....	11204
Hawaii and Pacific Islands.....	20035	6-cent air mail (poster).....	12969
Idaho.....	20036	6-cent precanceled air mail postal	
Illinois.....	20037	card (poster).....	7388
Indiana.....	20038	7-cent single and 14-cent reply-	
Iowa.....	20039	paid international postal cards	
Kansas.....	20040	(poster).....	16483
Kentucky.....	20041	8-cent air mail, in sheet, coll, and	
Louisiana.....	20042	booklet form (poster).....	1387
Maine.....	20043	8-cent Amelia Earhart commem-	
Maryland.....	20044	orative air mail postage stamp	
Massachusetts.....	20045	(poster).....	14644
Michigan.....	20046	15-cent Montgomery Blair air	
Minnesota.....	20047	mail (poster).....	11205
Mississippi.....	20048	International Red Cross, dedica-	
Missouri.....	20049	tion (remarks).....	21070
Montana.....	20050	luminescent tagged air mail	
Nebraska.....	20051	(poster).....	14645
Nevada.....	20052	philatelic releases.....	4083
New Hampshire.....	20053	Postal bulletin, see Postal service.	
New Jersey.....	20054	Postal cards:	
New Mexico.....	20055	commemorative, visit U.S.A. pro-	
New York State.....	20056	gram (remarks).....	16964
North Carolina.....	20057	6-cent precanceled (poster).....	7388
North Dakota.....	20058	7-cent single and 14-cent reply-paid	
Ohio.....	20059	international (poster).....	16483
Oklahoma.....	20060	Postal clerks, 3 & 2, Navy training	
Oregon.....	20061	course.....	18223
Pennsylvania.....	20062	Postal delivery, see Postal service.	
Puerto Rico and Virgin Islands.....	20063	Postal employees, see Postal service.	
Rhode Island.....	20064	Postal inspection service.....	9325
South Carolina.....	20065	Postal Savings System:	
South Dakota.....	20066	GAO audit report, 1963.....	10256
Tennessee.....	20067	report of operations, 1962.....	4708
Texas.....	20068	Postal service:	
Utah.....	20069	accelerated business collection and	
Vermont.....	18270	delivery (address).....	5670
Virginia.....	20070	code of Federal regulations.....	8254
Washington State.....	20071	Communist China, rapid develop-	
West Virginia.....	20072	ment.....	2975
Wisconsin.....	20073	contract mail haulers, Federal	
Wyoming.....	20074	wage-hour law application....	5765
Postage:		employees—	
fourth-class rates, authority to fix—		annual report on statutory salary	
hearings.....	11912	systems, message from the	
report.....	13559	President.....	9839
House Members, additional allow-		salaries, adjust, hearings.....	18957,
ance, report.....	18875	20502	
Postage stamps:		summary analysis of President's	
commemorative—		proposal for reform of Federal	
1-cent Andrew Jackson regular		statutory salary systems.....	13666
postage stamp in coils (post-		use and care of revolvers.....	12970
er).....	11202	5-cent city mail delivery commem-	
1-cent regular Andrew Jackson		orative stamp (poster).....	20021
(posters).....	7386	investigation, authorization, re-	
4-cent Winslow Homer (poster)....	1385	port.....	4769
5-cent alliance for progress		laws.....	16485
(posters).....	16482	mail transportation contracts, mod-	
5-cent American flag stamp (post-		ernize laws—	
er).....	3254	hearing.....	15328
		report.....	15241



# JANUARY-DECEMBER

	Entry
Postal service—Continued	
modernization programs (re-	20024
marks)-----	
position descriptions and salary	4023
schedules-----	4024
postal bulletin-----	
postal service in office buildings,	
planning and designing-----	14647
publications, price list-----	11220
research, development and mech-	
anization-----	5673
special services performance, cost	
ascertainment report, 1962-----	11206
ZIP code and other innovations,	
evaluation (address)-----	21068
ZIP code directories-----	18270, 20025-74
ZIP code information, publications	
for sale by Superintendent of	
Documents, price list-----	20089
see also Air mail—International	
postal service—Mail matter—	
Post offices—Postmasters.	
Posters:	
Agricultural Marketing Service---	7535
Agriculture Department-----	18440
Army Department-----	18554
DOD—P series-----	18538
educational aids-----	4950-51
Forest Service-----	10252
Post Office Department commemo-	
rative stamps-----	1385-87,
3254, 7386-88, 11202-205, 12969,	
14642-645, 16482-483, 18267-	
269, 20020-22, 21069,	
sold by Superintendent of Docu-	
ments, price list-----	12981
Postmaster General, see Post Office	
Department.	
Postmasters:	
examination announcements, 1939,	13323
4th class, examinations, instruc-	
tions to applicants-----	4624, 20384
positions, 1st, 2d, 3d class, infor-	
mation-----	11664
Posts, wood preservatives in Missis-	
sippi, 1963 progress report-----	12167
Postural reflexes in intact animals	
under conditions of weightless-	
ness-----	7297
Potash, minerals yearbook chapter---	16328
Potassium:	
and phosphorous fertilizers, effects	
on yield, etc. of grass-legume	
mixtures-----	16712
dermal excretion, relation to bal-	
ance, etc-----	1813
extracellular, regulation during hy-	
pothermia-----	16794
high temperature properties-----	3234,
7371, 16463	
Potassium alum, process for produc-	
ing alumina from clay, evalu-	
ation-----	19862
Potassium carbonates, bicarbonate	
dry chemical fire fighting	
agents, discharge characteris-	
tics-----	16460
Potato leafhopper, on alfalfa, control-	9576
Potatoes:	
acreage, yield, etc., by States and	
seasonal groups, 1961-62-----	20193
bulk handling and shipping to proc-	
essing plants-----	18422
certified seed report, 1962-----	5750
controlling insects-----	9570
early, Alabama and Florida, pre-	
packaging at production	
points-----	4358
frozen french fried-----	
processing-----	14838
U.S. standards for grades-----	16710
futures commitments of traders-----	3529
futures trading and open con-	
tracts-----	3749-50

	Entry
Potatoes—Continued	
industry problems (remarks)-----	1721
Irish—	
futures trading on commodity ex-	
changes, prohibit-----	9920, 20604
hearings-----	18846
report-----	20605
marketing orders, hearing-----	
marketing quotas through acre-	
age allotments, hearings-----	11870,
20605	
utilization, 1962 crop-----	18341
Maine, futures trading-----	7815
marketing costs and grower's re-	
turns, impact of technological	
change-----	1706
spring, acreage marketing guides---	4330
storages in fall crop area, shell ven-	
tilation systems-----	5826
summer and fall, acreage market-	
ing guides-----	5779
total stocks, monthly report-----	4239
winter, acreage marketing guides---	14814
Potentiometers:	
calibration, practical method-----	9214
K-3 precision, Leeds and Northrup,	
test instrument calibration	
technique-----	9286
Potholes, prairie, hydrology, current	
studies-----	12227
Potomac River and Valley:	
basin study, summary-----	6375
crystalline rocks of gorge near	
Washington, D.C-----	19317
North Branch, engineer report---	
departmental edition-----	442
document edition-----	231
Pots, see Crab pots.	
Potter, Jeannette, cancer manual for	
public health nurses-----	20091
Potter, W. T., paper, Apr. 8, 1963----	9095
Potterbaum, Leonard H., relief-----	6099
Pottery, earthenware table and kitch-	
en articles, Tariff Commission	
report-----	9460
Poulos, N. E., high temperature ce-	
ramic structures-----	9279
Poultry:	
and products inspection and grad-	
ing programs, list of approved	
chemical compounds-----	4333, 16704
and products, transportation regu-	
lations-----	11426
exports to Common Market, hear-	
ing-----	18915
foreign agriculture circular-----	3720
hatcheries and dealers participating	
in national poultry improve-	
ment plan-----	7544
supplement-----	7545
hatchery production-----	3763
health requirements and regula-	
tions governing interstate and	
international movement-----	18405
icepacked, shipping containers for	
short hauls-----	5830
industry—	
growth and development, Euro-	
pean Common Market problems	
(address)-----	7555
small business problems, report---	2040
interstate transportation, code of	
Federal regulations-----	18408
inventory, 1963-----	5747
know poultry you buy-----	
PA series-----	18439
poster-----	18440
market information and prices, ex-	
planation of Dairy and Poul-	
try Market News Service-----	4
market statistics, 1962-----	5845

# INDEX 1963

	Entry		Entry
Poultry—Continued		Power—Continued	
national improvement plan—		Industry—	
breed distribution of participat-		and air pollution (remarks)----	7409
ing flocks-----	11	Communist China, translations--	651
conference report, 1962, changes-	1658	1030, 1102, 2553, 2699, 2792,	
hatcheries and dealers participat-		2913, 6739, 6870, 7044, 8456,	
ing, supplement-----	11437	8482, 8533, 8842, 8983, 10440,	
hatchery and flock participation,		12347, 12724, 14135, 14181,	
tables-----	1632	15966, 16089, 19382, 19560,	
provisions-----	9583	19667, 19742, 20913.	
record of performance test, sum-		machinery, USSR industrial devel-	
mary, 1961-62-----	7546	opment, translations-----	1020,
plants operating under poultry and		2480, 2769, 5353, 7103, 8492,	
egg inspection and grading		10618, 12285, 14271, 15713,	
programs, lists-----	3, 11424	15765, 15806, 17683, 17973,	
poultry and egg situation-----	4028	19570.	
processing industry waste treat-		motive, for class 1 railroads-----	3934
ment studies-----	16530	nuclear energy for space propul-	
products—		sion and auxiliary power, hear-	
inspected and graded, labeling--	13139	ings, index-----	4665
prospects for foreign trade-----	8289	ocean as source, USSR study-----	17863
publications, price list-----	5681	power input to small flat plate from	
reproductivity inhibition, recent		diffusely radiating sphere with	
findings-----	559	application to earth satellites,	
slaughtered under Federal inspec-		spinning plate-----	5580
tion, monthly report-----	4029	statistics of class 1 railroads-----	3746
used in canning and processed		USSR, fuel-power balance-----	6858
foods, monthly report-----	4029	see also Atomic energy—Electricity.	
see also Chickens—Turkeys.		Power cables, see Electric cables.	
Poverty, elimination in U.S., ap-		Power laundries, see Laundry and	
praisal of housing policies ef-		laundries.	
fectiveness, research report on		Power lines, see Electric lines.	
slums and insecurity-----	14700	Power meters, see Electric meters.	
Povinelli, Louis A., effect of oxidizer		Power plants:	
particle size on additive agglomeration		maintenance, repair, and altera-	
-----	1280	tions, civil aeronautics man-	
Powder metallurgy, see Metallurgy.		ual, supp-----	476
Powder River Basin, oil sands, sus-		mechanics examination guide-----	15539
ceptibility to water damage-----	1233	see also Electric power plants—Nuclear	
Powders:		reactor power plants—	
metallic, isothermal sintering under		also, power plants by name, e.g.	
pressure, USSR study-----	8604	Parosena Thermoelectric	
metallurgy, USSR articles-----	8766	Power Plant.	
multipurpose fire extinguishing		Power presses, comparison of State	
agents, evaluation-----	11161	safety codes with ASA stand-	
powder fuel processing by 2-pass		ards, chart-----	3018
swaging, effect of particle size		Power reactors, see Nuclear reactor	
and distribution-----	1830	power plants—Reactors (atomic).	
production of refractory metals,		Power resources, papers prepared for	
USSR articles-----	699	United Nations Conference-----	5094
sintered aluminum, use in produc-		Power series solutions of one-dimen-	
ing heat-resistant material,		sional flow equation for expon-	
USSR study-----	17994	ential and linear diffusivity	
specific area in production of hard		functions-----	1629
alloys, determination, USSR		Power transmission equipment, me-	
study-----	706	chanical, Federal item identifi-	
Powell, Howard E.:		cation guides for supply cat-	
alkyl-dithiocarbamic acid amine salt		aloging supplement-----	3652
as flotation collectors for		Powerplants, see Power plants.	
sulfide lead slime-----	1232	Powers, Donald B., relief-----	7906
beneficiation of refractory clay--	3097	Powers, Harry R., jr., annosus root	
hydrocyclone in clay beneficiation-	16345	rot in eastern pines-----	10210
magnetic susceptibility of siderite-	10957	Powers, Joseph M., teaching ma-	
Powell, James A., relief-----	17094	chines, ASTIA bibliography-----	4440
Powell, Lake, filling and operation--	8020	Pozsonyi, Jozsef, and family, relief-	8037
Powell, Wyo.:		Practical nurses, see Nurses and	
land exchange—		nursing.	
law-----	17021	Pragmatism, and semiotics, Charles	
reports-----	17101, 17240	W. Morris' gnoseological theory,	
Powell County, Mont., geology of		USSR study-----	10471
Basin quadrangle-----	20729	Prairie du Pont Levee and Sanitary	
Power, E. A., advance report on		District:	
fisheries of United States,		engineer report—	
1962-----	4939	departmental edition-----	451
Power:		document edition-----	259
Communist China, translations--	20861	Prairies, potholes, hydrology, current	
conservation, code of Federal regu-		studies-----	12227
lations-----	6425	Prasky, Charles:	
engineering, abstracts pertaining		differential sulfatizing process for	
to Communist China in Soviet		recovery of ferrograde manga-	
journal-----	1032, 8655, 12546, 14377	nese-----	5487

	Entry		Entry		
Prasky, Charles—Continued		Precipitation—Continued			
sulfatization of manganiferous carbonate slates in fluidized bed reactor-----	16330	measurements resulting from 3-dimensional wind flow in northern California storm-----	20246		
Pratt, Harry D., mites of public health importance-----	14668	runoff precipitation relation, statistics-----	607		
Pravda (periodical):		Tennessee River basin-----	4031		
attacks Italian Socialist leader Nenni for anti-Communist policy-----	876	Weather Bureau measurements, history-----	7516		
editorials, translations-----	669	see also Rain.			
711, 727, 777, 796, 815, 832, 937, 984, 1024, 1042, 1073, 1135, 2481, 2500, 2522, 2587, 2591, 2634, 2673, 2716, 2738, 2761, 2836, 2862, 2890, 2898, 2941, 2956, 2984, 3001, 5151, 5171, 5199, 5223, 5252, 5288, 5307, 5355, 5377, 5388, 5416, 6731-32, 6777, 6816, 6855, 6898, 6903, 6978, 6997, 7029, 7045, 7072, 7095, 7117, 8440, 8519-20, 8590, 8611, 8634, 8664, 8707, 8740, 8787, 8840, 8867, 8906, 8925, 9000, 9019, 10391, 10409, 10450, 10468, 10491, 10521, 10539, 10567, 10598, 10696, 10701, 10723, 10741, 10806, 10845, 12274, 12288, 12317, 12364, 12404, 12436, 12474, 12508, 12529, 12610, 12674, 12689, 12761, 12770, 14083, 14107, 14133, 14198, 14213, 14303, 14342, 14394, 14431, 15700, 15720, 15741, 15767, 15789, 15854, 15868, 15885, 15910, 15937, 15956, 15964, 16026, 16043, 16063, 16102, 16129, 16160, 16178, 16215, 16237, 17583, 17599, 17603, 17624, 17674, 17697, 17730, 17753, 17771, 17786, 17827, 17845, 17859, 17907, 17928, 17953, 17981, 18006, 19403, 19409, 19422, 19442, 19470, 19496, 19518, 19526, 19583-584, 19606, 19619, 19654, 19675, 19690, 19732, 19751, 19763, 20768, 20809, 20859, 20869, 20910.		Precipitation (chemistry):			
Prayers:		carrier-precipitation and filter electrode, use for spectrochemical analysis of solutions-----	14514		
school—		Precision endless-loop magnetic tape recorder for space applications-----	5579		
not establishment of religion, hearings-----	4787	Precision instruments:			
permit, amend Constitution, hearings-----	4787	components, initial failures, study, USSR industrial development, translations-----	5659		
permit prayerful meditation, hearings-----	4787	1006, 1044, 1109, 1120, 2459, 2611, 2644, 2731, 2758, 2958, 6724, 6944, 7021, 7054, 7081, 8464, 8734, 8922, 8931, 8957, 8974, 8995, 9002, 9013, 10532, 10553, 10718, 10782, 10847, 12421, 12607, 12649, 12749, 14118, 14123, 14125, 14263, 14266, 14287, 14422, 15690, 15701, 15724, 15751, 15797, 15823, 15837, 15848, 15859, 15873, 15898, 15919, 15939, 15945, 15982, 16005, 16019, 16039, 16064, 16130, 16144, 16161, 16165, 16174, 16193, 16200, 16222, 16244, 17589, 17616, 17635, 17642, 17664, 17719, 17722, 17775, 17797, 17931, 19528, 19571, 19720		see also Pulse counters.	
Pre-Cambrian period:		Precision measurements, see Physical measurements.			
geology, etc-----	2348	Precooling, see Cooling.			
iron deposits near Atlantic City, Wyo-----	10285	Prediction (psychology):			
pegmatites and other rocks in southern Black Hills (series)-----	15608	adjustment to prolonged submergence aboard fleet ballistic missile submarine-----			
Precious stones, gem stones, minerals yearbook chapter-----	18072	background variables-----	7198		
Precipitates, insoluble, formed while heating fuels, dispersion, USSR study-----	6839	objective tests-----	7199		
Precipitation:		airman success from responses to items of Kelley activity preference report-----	64		
Alaska, probable maximum data for areas to 400 square miles, etc-----	16692	airman technical school success from homogeneous biographical inventory scores-----	67		
Columbia River basin, monthly-----	2918	Army clerk course, evaluation of tests to predict success-----	14948		
decennial census of U.S. climate-----	1592	automatic data processing programming course, success-----	7684		
7507-14, 9493-502, 11386-406, 13118-127, 14782-798, 16658-666, 20233-243, 21155-175.		correction of correlation with dichotomous variable for restriction in range-----	7623		
Hawaiian Islands, probable maximum-----	16667	officer job rankings from ratings on 2 sets of job evaluation factors-----	16786		
hourly data, by States, etc-----	3771	peer ratings as predictors of disciplinary problems-----	4462		
mean number of days with 0.01 inch or more, monthly and annual, national atlas sheet-----	14801	speech discrimination scores, prediction from test information-----	4423		
measurement on forested experimental watersheds-----	20609	success in technical training from educational achievement information-----	16784		
		unsuitability among 1st-term airmen from aptitude indexes, high school data, etc-----	18495		
		Prefabricated airfield and road surfacing investigation-----	2228		
		Prefabricated buildings, see Buildings.			
		Premium pay, see Hours of labor.			
		Premiums (insurance), see Life insurance.			
		Prenatal care, mientras su bebe esta en camino-----	6014		

# INDEX 1963

Entry	Entry
Prentiss County, Miss., forest inventory statistics.....	3379
Prepackaging, <i>see</i> Packaging.	
Prepared cereals, <i>see</i> Cereals as food.	
Preparedness, <i>see</i> National defense.	
Presbyterian Retirement Facilities Corp.:	
land exchange—	
law .....	17021
reports .....	17101, 17240
Prescription for progress, development loan program to help your community.....	5717
Prescriptions of private physicians, require filling in VA pharmacies, GAO report.....	15594
Presentations:	
middleman.....	3241
Navy Department.....	3240-43
Navy's quick slide system.....	3242
paralysis, its cause and Rx cure.....	3240
Preservation of food, <i>see</i> Food.	
Preservation of materials, Federal test method standard.....	13943
Preserves, definitions and standards.....	4975
Preserving urban open space.....	11368
President of United States:	
basic staff functions by Budget Bureau.....	1854
campaign, 1964, suspend equal time provisions of communications act—	
hearings .....	9940, 17307
reports .....	11820, 11843
code of Federal regulations.....	6410, 15502
economic report—	
departmental edition.....	3258
document edition.....	2034
hearings .....	6065
print additional copies, reports .....	8080, 11865
report .....	6285
former Presidents—	
authorize to address Senate, report .....	17298
serve as Senators at large, hearings .....	17334
funds appropriated to, hearings.....	7985
goals for Atlantic community (address) .....	14934
inability, succession to powers and duties, hearings.....	15397
Kennedy's report to the people on Soviet missile bases in Cuba (address) .....	1577
messages, <i>see</i> , in main alphabet, subject of message.	
nomination and election method, constitutional amendments, hearings .....	17318
papers—	
index series.....	5466, 19811
Kennedy, John F.....	13932
Truman, Harry S.....	524, 19200
presidential transition act of 1963—	
hearing .....	9937
reports .....	9914, 15238
press releases.....	4084
search for peace, new opportunities (address).....	18536, 20145
state of the Union address.....	2023
state of the Union message, excerpt .....	7434
step toward peace, report to people on nuclear test ban treaty (address) .....	14935, 16819
toward strategy of peace (address) .....	13232, 13234
President's Advisory Committee for Labor-Management Policy:	
American products in world market, report .....	18272
appropriations, 1964, hearings.....	7985, 9997
President's Advisory Panel on National Academy of Foreign Affairs, report.....	3261
President's Commission on Campaign Costs, legislative recommendations .....	337
President's Commission on Status of Women:	
news release.....	3967
report .....	20075
report of Protective Labor Legislation Committee.....	20081
President's Committee for Traffic Safety, highway safety action program reports.....	16542
President's Committee on Employment of the Handicapped:	
ability counts contest for 11th- and 12th-grade students, announcement .....	9034
job placement of mentally retarded, guide .....	14448
jobs for handicapped, program guide, 1963-64, pathways to action .....	18029
minutes of meeting, 1962.....	3020-21
performance, story of the handicapped .....	4014
press releases.....	4085
Women's Committee, operation-volunteers .....	10889
President's Committee on Equal Employment Opportunity:	
equal employment opportunity investigations and compliance review, guide.....	1389
Federal Government employment, rules and regulations.....	3259
as amended.....	14648, 20079
general information.....	20077
goal, for all Americans equality in job opportunity.....	12973
information newsletters.....	3789
President's Committee on Equal Opportunity in Housing, questions and answers in Executive order 11063 .....	8359
President's Committee on Migratory Labor, press releases.....	4086
President's Committee on Youth Employment:	
press releases.....	4087
report and recommendations.....	9327
reports of subcommittees.....	18274
President's Council on Aging, annual report, the older American.....	11209
President's Council on Physical Fitness:	
general information.....	5675
statement by the President, problem, aims, etc.....	12974
President's Missile Sites Labor Commission:	
press releases.....	4088
report .....	20083
President's Panel on Mental Retardation:	
highlights.....	4598
mental retardation, national plan for national problem, chart-book .....	20080
recommendations, etc.....	6572
reports—	
conference on implications for children .....	16918
mission to Denmark and Sweden.....	14651
mission to Netherlands.....	20082
task force on education and rehabilitation .....	21074

	Entry
President's Panel on Mental Retardation—Continued	
reports—continued	
task force on law	21075
task force on prevention, clinical services and residential care	18273
President's reorganization plans, see Government reorganization plans.	
President's Science Advisory Committee:	
Panel on High Energy Accelerator Physics, report	15016
use of pesticides, report	11210
President's Water Pollution Control Advisory Board, functions and responsibilities	1428
Presnell, John G., jr., panel flutter results for flat and curved titanium skin panels	5595
Press, Charles, rural residents and urban expansion	20626
Press:	
Albania, information reports	2513, 2942, 6713, 8510, 10578, 12322, 14151, 15723, 16238, 17829, 17853, 19532, 19598.
American, pro-Castro forces attempts to pervert, testimony of Carlos Todd, hearing	4784
Bulgarian provincial, summaries	2488, 2567, 2935, 5156, 6647, 6822, 6940, 8458, 8805, 9012, 10490, 10758, 12337, 12758, 14293, 14364, 15852, 15986, 18004, 19383, 19509, 19767.
comments on TVA's 30th anniversary	14747
Communist comments on Colombian youth activity	2887
Czechoslovak provincial, summaries	654, 747, 851, 968, 1089, 2511, 2649, 2670, 2815, 2906, 5120, 5178, 5272, 6658, 6726, 6878, 6951-52, 6976, 8507, 8656, 8772, 8934, 10395, 10483, 10548, 10760, 10879, 12395, 12397, 12517, 12627, 12709, 12735, 14249, 14376, 15699, 15808, 15833, 15926, 16004, 16100, 16213, 17687, 17878, 17967, 19427, 19493, 19514, 19649, 19745, 20829.
Hungarian provincial, summaries	716-717, 771, 998, 1041, 1091, 2544, 2643, 2893, 2977, 5197, 5329, 6753, 6895, 6993, 7109, 8582, 8606, 8722, 8850, 8941, 10398, 10538, 10676, 10759, 10860, 12478, 12594, 12646, 12728, 14167, 14276, 14409, 15768, 15813, 15883, 15896, 16031, 16168, 16214, 16255, 17595, 17869, 17943, 19393, 19520, 19601, 19655, 20835, 20907.
Indonesia, abbreviations and terms used, glossary	20775
Indonesian, surveys	730, 983, 1152, 2746, 2965, 5357, 6790, 7033, 8562, 8865, 10412, 10737, 12381, 12631, 14146, 14365, 15834, 16146, 17644, 17873, 19414, 19595, 20790.
Israeli Communist, comments on anti-Arab riots, labor contracts, and nuclear weapons	825
Latin American, glossary of abbreviations used	12696
Mexican, comments on ex-Communist Pellecer	3007
Mongolia, functions	12460
New China News Agency, closing of Prague office, Chinese protests	19443

	Entry
Press—Continued	
Polish provincial, summaries	662, 755, 869, 917, 1098, 1143, 2618, 2743, 2861, 2905, 2987, 5253, 6705, 6763, 6922-23, 7080, 8534, 8649, 8797, 8952, 10404, 10499, 10642, 10733, 12282, 12338, 12539, 12599, 12750, 14142, 14251, 14340, 14383, 15707, 15890, 15969, 16062, 16152, 17649, 17720, 17793, 17926, 17961, 19499, 19574, 19622, 19740, 20831.
responsibility in labor reporting, etc. (address)	10883
Rumanian provincial, summaries	742, 820, 982, 1015, 2571, 2622, 2745, 2885, 5165, 5319, 5393, 6759, 6905, 6996, 7078, 8488, 8657, 8866, 10377, 10501, 10634, 10736, 10870, 12432, 12562, 12651, 12752, 14161, 14286, 14343, 15829, 15948, 16050, 16169, 17707, 17776, 17946, 18002, 19434, 19475, 19753, 20832.
Soviet technical, current review (periodical)	3576
Press releases, see names of offices issuing releases.	
Presses, see Power presses—Printing presses.	
Pressmen:	
cylinder, examination announcement, amendment	18720
presswork, theory and practice	12238
Pressure:	
aircraft static-pressure systems calibrations by ground-camera and ground-radar methods, test program	18163
base, of simple wing-body, effect of multiple-jet exits	5555
buffet, on models of large manned launch vehicle configurations	12851
cambered and twisted wing, swept planform, wing-tunnel data at Mach nos. of 1.61 and 2.01, errata	3126
chamber, breathholding ability relationship to performance in pressure chamber	7189
coefficients associated with sinusoidal protuberances on flat plate at Mach no. 3	9161
distribution—	
blunt delta wing for angles of attack up to 35° at Mach numbers of 3.4 and 4.7	3148
blunt delta wings at angles of attack up to 90° and Mach number 3.85	14588
center-line of 2-dimensional bodies with leading-edge angles	14556
delta wing swept 65°, at Mach number 5.96 at angles of attack from 65° to 115° and angles of roll from 0° to 25° at 90° angle of attack, effects of rounding corners and leading edges	14589
effect on blunt cylinders at hypersonic speeds in air	20991
flat-face cylinder at Mach number range of 2.49 to 4.44	5554
hemisphere-cylinder and bluff-afterbody model in methane-air combustion products and in air	1299
induced on flat plate by rockets exhausting upstream and downstream	1300



# INDEX 1963

	Entry		Entry
Pressure—Continued		Preston, Constance C., tables to determine ferrimagnetic resonance linewidth of non-metallic magnetic materials.....	9215
distribution—continued		Prevention of accidents, <i>see</i> Accidents.	
Mach nos. 6.0 and 9.6 over 2 re-entry, configurations for 5th-stage Scout vehicle.....	11086	Preventive medicine, <i>see</i> Medicine.	
0.0667-scale model of X-15 airplane.....	3116	Previte, J. J., potentiation of endotoxin by exposure to cold.....	18477
over forward portion of Project Fire space-vehicle configuration.....	7269	Prezados amigos, informações sanitárias para as pessoas que visitam os Estados Unidos.....	7410
rigid wings simulating parawings.....	9159	Pribilof Islands, living and working conditions.....	13904
spoiler-type controls on trapezoidal wing.....	3107	Price, T. R., synthesis of $\omega$ -halohexadecanoic acids.....	18233
surface, induced on flat plate by cold air jet issuing perpendicularly from plate, etc.....	7276	Price lists, <i>see</i> Government publications— <i>also</i> subjects.	
surface, on proposed Project Fire space vehicles at Mach numbers from 0.25 to 4.63.....	19928	Price supports, <i>see</i> Prices— <i>also</i> names of commodities, etc.	
time dependent air forces on wings with supersonic leading and trailing edges and subsonic side edges applicable to wing deforming harmonically according to general polynomial equation.....	3135	Prices:	
wing, propeller slipstream effects determined on large-scale 6-propeller VTOL model at static thrust.....	1302	agricultural prices (periodical).....	3427
effect of thermal conductivity of gas.....	18243	Air Force guide for pricing, Air Force pamphlet.....	7613, 16778
fluctuations in hermetic cranial cavity.....	9197	chartbook, 1953-62—	
force and pressure measurements on canopy-fuselage configurations.....	5531	departmental edition.....	7168
forming of aluminum oxide.....	5500	supplement.....	18039
level, effect on afterburner-wall temperatures.....	5527	document edition.....	6079
low, breakdown voltages of some electronegative gases.....	12872	supplement.....	17065
maintenance project, Butler and Cowley Counties, Kans., 1963.....	12829	consumer price index.....	3548
measurement—		by individual city and commodity.....	3549
flat face of blunted 10° half-cone body (semidisk).....	11028	conversion to 1957-59 standard reference base period.....	10909
flat-plate surface for range of Mach numbers and boundary-layer thicknesses.....	3124	seasonal factor, June 1953-May 1961.....	14474
piston gage, reduction of data.....	12898	selected items and groups.....	3550
X-15 at transonic speeds.....	11005	short description.....	9063
mechanical, use in demineralization of saline water.....	14060	crop values, season average prices, value of production, 1961-62.....	3364
Navaho missile and booster, study.....	10990	demand and price situation.....	3591
rapid decrease, effect of composition on combustion of solid propellants.....	1314	fair trade, amend Federal Trade Commission act, hearings.....	328
ratios, Saturn model.....	11021	foreign countries, key industries, economic policies and practices, materials.....	20448
stabilized structures, theory.....	11080	important weapon in creating Communist economy, USSR translation.....	16105
static, characteristics on forward parts of 9 fuselages of various cross-sectional shapes at Mach number of 2.01.....	5533	income parity standards for agriculture.....	2129
<i>see also</i> Atmospheric pressure.		index numbers, hydraulic turbine industry.....	3782
Pressure gages:		Indexes—	
differential, for measuring suspended-sediment concentrations, investigations.....	14049	department store inventories.....	5451, 7170, 18042, 19803
inclined-piston deadweight.....	5478	use in escalator contracts.....	
Pressure-treated Douglas fir marine piles.....	5961	price supports—	
Pressure-treated southern pine marine piles.....	5962	active and announced programs.....	3413
Pressure vessels:		statutes, compilation.....	1638
axisymmetric, rotating pressurized filamentary structures, analysis.....	11081	spot market price, daily index—	
unfired, marine engineering regulations.....	18336	all commodities, Jan. 1957-Sept. 1962.....	1179
Pressurized water reactor, <i>see</i> Reactors (atomic).		weekly summary.....	3578
		stabilization, protect trademarks, etc.—	
		effects of bill, summary-analysis.....	20449
		hearings.....	13660
		report.....	15232
		user charges, Budget Bureau report.....	7726
		USSR price formation, etc.....	10615
		wholesale index numbers.....	3777
		wholesale price index—	
		monthly.....	4308
		prices and price indexes, monthly.....	4307
		weekly.....	4306
		wholesale prices and price indexes, 1960.....	16291
		<i>see also</i> names of commodities.	
		Pricing policy, <i>see</i> Prices.	
		Priem, Richard J., comparison of injectors with 200-pound-thrust ammonia-oxygen engine.....	5526

	Entry		Entry
Prithalla, Ferdinand F., basic data on economy of Czechoslovakia.....	6586	Prisons and prisoners—Continued	
Primary cosmic radiation.....	18241	prisoners released from State and Federal institutions, 1960.....	7390
Primary grades, <i>see</i> Elementary education.		States and Federal institutions.....	1390
Primary problems in pathology of newborn children, USSR.....	5261	<i>see also</i> Penitentiaries.	
Primary production of bodies of water.....	14959	Prisons Board, report, 1961.....	1390
Primary Productivity Measurement, Marine and Freshwater, Conference, proceedings, 1961.....	16858	Prisons Bureau, report, 1962.....	11211
Primates, postirradiation, hyperglycemia results.....	16800	Pritchard, E. Brian, constant-altitude variable-pitch reentry maneuver at velocities up to escape velocity.....	12881
El primer año de vida de su bebe.....	16916	Private International Law, Hague Conference on, <i>see</i> Hague Conference on Private International Law.	
Primers (Indian):		Private Law, International (Rome) Institute for Unification, <i>see</i> International (Rome) Institute for Unification of Private Law.	
Billy Black Lamb.....	8366	Private laws, <i>see</i> Law.	
Prince Georges County, Md.: land conveyance to American National Red Cross, reports.....	11955, 18888	Private outdoor recreation facilities.....	16473
rural fringe and urban expansion, case study.....	19089	PRL, <i>see</i> Personnel Research Laboratory.	
Prince William Sound, pink and chum salmon fry estimating abundance, 1957.....	2300	Probabilities (mathematics):	
Prindle, Richard A.: air pollution, public health hazard, health effects from repeated exposures to low concentrations of air pollutants.....	3272, 3283	algebra of stochastic quantities.....	20300
motor vehicles, air pollution, and public health.....	1413	comparing multinomial probabilities.....	68
Prineville, Oreg., ground water in area.....	8349	diurnal patterns of probability zones of increased turbulence at high altitudes, USSR study.....	985
Prineville Dam, design and construction, technical record.....	13036	economic time series, special analysis.....	16910
Printed circuits, pneumatic design and pure fluid control devices, USSR study.....	19387	F statistic, estimation by digital computer technique.....	16783
Printers, joint apprenticeship committees and training in new processes for compositors.....	5901	feature characteristics and 6th feedback loop, USSR study.....	19677
Printing:		formulation of 2 economic problems, USSR study.....	2560
commercial, industry, outlook for 1963 and review of 1962.....	5974	optimal control problem, USSR study.....	668
industry:		reliability model and analysis for Project Mercury 3-orbit manned and unmanned mission.....	1313
new electronic equipment.....	826	transition, level population densities by self-absorption of radiation.....	20303
union wages and hours.....	14472	Probability distribution of low flows.....	10293
industry report.....	4107	Probability prognostication in activity of brain, USSR.....	16184
Patent Office attorneys roster, quality typography from computer data using magnetic tape storage and computer processing for photocomposition input.....	16480	Probability theory and core design.....	14974
<i>see also</i> Government printing and binding—Typesetting.		Probate law and practice, District of Columbia, authorize testator to add properties to existing trusts, report.....	7975
Printing Joint Committee: committee print.....	6209	Probation, Federal probation (periodical).....	3666
Government paper specification standards.....	6210	Probation officers, juvenile probation officers training, workshop report.....	174
Government printing and binding regulations.....	8016	Probes:	
Printing machinery industry, outlook for 1963 and review of 1962.....	4549	Arctic meteorology photo probe, polarized light experiment.....	16364
<i>see also</i> Printing presses.		electrostatic spherical theory in slightly ionized, collision-dominated gas.....	18577
Printing presses, presswork, theory and practice.....	12238	moon, periodic orbits.....	5609
Prints:		radar, of planet Mercury, USSR study.....	8570
art work, copyrighted.....	4790	radioactive, use in measuring characteristics of snowpacks.....	19259
commercial, copyrighted.....	2108, 19071	solar, vehicular technology.....	11050
Priroda (periodical): translations.....	6712	unmanned planetary, using low-fineness-ratio blunted cones, transonic investigation.....	16399
Prisons and prisoners:		Problem solving:	
Atlantian (periodical).....	3472	differences between good and poor problem solvers.....	17366
eagle (periodical).....	3608	extremal, use on electronic analogue computers, USSR study.....	12334
executions, 1962.....	11212	problems, challenges, accomplishment, progression (address).....	11591
Inland lantern (periodical).....	2812		
national prisoner statistics.....	7390		
national prisoner statistics series.....	9328, 11212		
new era (periodical).....	3956		
personnel employed in State and Federal institutions, 1961 statistics.....	9328		

# INDEX 1963

	Entry		Entry
Problems connected with statistical definition of urban and rural population	8583	Production—Continued	
Problems in psychology (USSR periodical):		linear programming application in planning of assortment, USSR study	5287
translations	12705	national defense, report	4766
Problems of ichthyology (USSR periodical):		1980 figures, USSR, CP programme discussion	2487
translations	10482, 10800, 14174	output index based on production cost norms, USSR study	19538
Problems of medical chemistry (USSR periodical):		planning, analyzing information, USSR study	2814
translations	970	productivity in railroad industry (address)	1184
Problems of psychology (USSR periodical):		research reports	40, 1718-20, 4373-75, 5840, 9587, 13184, 16756-759.
translations	933, 988, 10420	size of industrial enterprises and labor productivity, USSR translations	8669
Problemy gematologii i perelivaniya krova (periodical):		social development, some questions relating to laws governing, Communist China	666
translations	15916, 15931	Socialist speed, Communist Chinese explanation	6661
Proceedings of National Museum	3183, 7323-24, 9234-36, 11115, 12916	two main kinds, quantitative relationship, Communist Chinese study	816
Processing of food, see Food processing—Food processing machinery—also names of foods processed.		two points on question of productive forces, Communist Chinese study	965
Processing personnel actions	15107	U.S. 1961, exports in relation to USSR—	2396
Procurement, see Air Force—Air Force Department—Armed Forces—Army—Army Department—Army Electronics Materiel Agency—Defense Department—Defense Supply Agency—Government contracts—Government supplies—International Development Agency—Military supplies—Navy—Navy Department—Synopsis of Government proposed procurement and sales contract awards—also names of commodities procured.		gross national product, comparative growth rates	7734
Produce, see Agricultural products.		sewing industry enterprises, how to compute	8633
Produce stores, see Stores.		see also names or classes of commodities.	
Producer livestock program, report	9897	Production credit associations: bank and PCA lending to farmers, operations, 1962, summary	19202 8203
Production:		Production equipment:	
agricultural—		industrial, for storage or shipment, preparation and inspection	13244
and industrial, problems of abundance (address)	14847	manufacturers' expenditures for new equipment	7745
graphic summary, census of agriculture 1959, special reports	11637	supervision needed for using funds, USSR study	16104
Latin American countries, Jamaica and Trinidad, indices	2135	Productivity, see Production.	
coal mining injury experience, related data analysis	1207	Productivity and Technological Developments Office, Labor Statistics Bureau, publications, list	9081
constructing algorithm simulating process, USSR study	12711	Products, see Agricultural products—Commercial products.	
defense production act amendments of 1962, hearings	327	Professional guide PSD-PG (series), 4607, 9739, 16935, 18716	
defense production, small business pooling	11279	Professional papers, Geological Survey—	601-608, 2345-51, 5019-24, 6553-60, 8334-39, 10287-293, 12228-230, 14026-26, 15608-614, 17528-529, 19307-319, 20732-737.
definition of area of production under fair labor standards act	9487	Professional workers:	
domestic, relationship to exports, 1962	17561	careers in Veterans Administration, today's best opportunities	13110, 18360
economic challenges of 1963 (address)	201	civilian job opportunities, Army Dept	11531
effects of proposed quality stabilization act, summary analysis	20449	first national assembly of Chilean Communist Party, report	757
expense, value in relation to utility, Chinese economists views	5369	placement of personnel	6355
funds in China, recent problem	2926	Professions:	
indissoluble bond with scientific institutes and laboratories, USSR report	2882	accounting, your progress and success at GAO	17515
labor productivity—		health, educational assistance act of 1963—	6199, 17326
measuring in monetary terms, USSR study	12401	hearings	18776
raising through composite plans, USSR study	6741	law	17283
law of development of relations, law of proportionate development, Communist China	845	reports	6180, 7945, 19335
		summary	19335
		military profession, today (address)	11509

# JANUARY-DECEMBER

	Entry		Entry
Professions—Continued		Project Fire (flight reentry program):	
publications, price list	14653	pressure distributions over forward	
training in Israel, information	6825	portion of space-vehicle config-	
Proffitt, William H., soil survey of		uration	7269
Hardin County, Tenn.	18319	static stability investigation of	
Profile of arc column	9594	space-vehicle and reentry pack-	
Profiles of manpower in science and		age configurations	1295
technology	16446	surface pressure distributions on	
Profiles of newly independent States	13068	vehicle models	19928
Profit:		Project Gemini (man-in-space pro-	
large corporations	4168	gram):	
manufacturing corporations, rates,		America's manned space flight pro-	
1947-62	13945	gram, general information	12844
profitable sales in U.S. trade cen-		Project Gnome (plowshare program):	
ters overseas	13351	methods and costs of shaft sluk-	
Progeny, ionizing radiation effects on		ing, AEC	20949
higher nervous system	14957	particle motion near nuclear deto-	
Prognostication, probability in brain		nation in halite	18585
activity, USSR study	16184	Project Mercury (man-in-space pro-	
Program aid series	39,	gram):	
4367-71, 5836-39, 7580-81, 9586,		aerodynamic characteristics of cap-	
13185-186, 14882-887, 16752-		sule model, wind tunnel inves-	
755, 18439-442	16752-	tigation at Mach nos. 0.50 to	
Program evaluation and review tech-		1.14	5563
nique:		America's manned space flight pro-	
AFSC policies & procedures hand-		gram, general information	12844
book	1774	chronology	19904
bibliography	7739	reliability model and analysis for	
DOD and PERT cost output re-		3-orbit manned and unmanned	
ports, supplement	19085	mission	1313
NASA PERT and companion cost		Schirra's flight, Oct. 3, 1962	3169
system handbook	1262	summary, including results of 4th	
NASA-PERT B computer systems		flight, May 15-16, 1963	19902
manual	14543	third U.S. manned orbital space	
PERT guide for management use	19084	flight, results	5540
PERT system, network analysis		Project PERT (program evaluation	
system, ER regulation	13881	research task):	
Program guides, Veterans Adminis-		Polaris management	3238
tration	13109	Project Pre-Buggy (plowshare pro-	
Programmed instruction:		gram):	
guide to materials, 1963	17384	chemical explosive cratering experi-	
materials in U.S. public schools,		ment, scope	16853
survey, 1961-62	10083	Project Relay:	
selected bibliography	18486	1st space communications experi-	
teaching machines, bibliography	20644	ment designed to link 3 conti-	
Programmer (track firing), see Track		nents	5536
firing programmer		supplement	5537
Programmers:		Project Rough Road Alpha (take-off	
automatic data processing course,		and landing on unprepared	
prediction of success	7684	surfaces)	11484
computer, post high school curric-		Project Rover (nuclear rocket devel-	
ulum	6332	opment program):	
Programming (computers), see Elec-		Nevada Test Site community, es-	
tronic computers		tablish, hearings	20446
Programming (planning):		Project Sedan (plowshare program):	
computer graphics, use in commu-		close-in effects of underground nu-	
nity renewal, manual for pro-		clear detonation on—	
fessionals in urban analysis		small mammals and inverte-	
and related fields	14764	brates	11576
PERT, CPS, CPM, PEP, LESS,		vegetation, caused by cratering,	
TOPS, CRAM, SCANS, COM-		throw-out, and blast damages	11577
ET, PROMPT, etc., bibliog-		ejecta studies	11574
raphy	7739	fallout characteristics and aerial	
system for Defense Dept.	4798	radiometric survey	14995
Progress in Missouri River Basin	4112	Federal Aviation Agency airspace	
Progress in sport fishery research,		closure	11572
1962	10189	final off-site radiological safety re-	
Progress, property, and just compen-		port	11569
sation, power of eminent do-		Influence of cratering device on	
main	10882	close-in populations of lizards	11575
Progressive patient care hospital, es-		naval aerial photographic analy-	
timating bed needs	7403	sis	14996
Project ALARM, see Automatic light		on-site radiological safety report	11570
aircraft readiness monitor		radiochemical and physical meas-	
Project ANNA, optical beacon	9617	urements of debris from under-	
Project Apollo (man-in-space pro-		ground detonation	11578
gram):		seismic effects from high yield nu-	
America's manned space flight pro-		clear cratering experiment in	
gram, general information	12844	desert alluvium	11573
terminology	18131	seismic velocity study	11580
Project English newsletters	381,	structural survey of private min-	
	12072, 20640	ing operations	11571
Project English Research Conference,		timing and firing	11579
proceedings, May 5-7, 1962	10076	weather and surface radiation pre-	
		diction activities	14994

# INDEX 1963

Entry	Entry
Project SIAT (synthesis of impact acceleration technology)--- 18353-354	Propellers : aircraft---
Project Skyfire progress report, 1959-60----- 17473	current industrial reports----- 1888, 16890
Project Social Studies, report----- 17385	specifications ----- 7750, 3619
Project Syncom, synchronous communication satellite, global network----- 14538	specifications and type certificate data sheets----- 15464, 17417
Project Whiteout (cloud-seeding method)----- 19134	controllable pitch, LST 1156 class, maintenance manual----- 3321
Projectiles : bullet sensitivity of ammonium nitrate-fuel oil mixtures, studies----- 10945	full-scale, tested with rigid, flapping blades, and cyclic pitch control, aerodynamic characteristics----- 11054
impact, meteoroid bumpers, single aluminum, effectiveness----- 11061	maintenance, repair, and alterations, civil aeronautics manual, supp----- 476
penetration into fine particles----- 3140	optimized, for ground effect machines----- 18350
see also Ballistics.	slipstream-----
Projections to years 1976 and 2000, economic growth, population, labor force, and leisure and transportation----- 3250	effects determined from wing pressure distribution on large-scale 6-propeller VTOL model at static thrust----- 1302
Pork, George M., nitrogen and oxygen atom recombination at oxide surfaces and effect of Tesla discharge----- 3151	wing pressure measurements for V/STOL wind-tunnel model simulating transition----- 20995
Prokopovitch, Andrew S. : chromium----- 18067	unshrouded, flight, etc., investigation of aerial vehicle supported by----- 18157
tungsten----- 19882	VTOL, descent, wind-tunnel tests----- 7292
tungsten in 1962, preliminary----- 5504	whirl flutter speeds and static-stability derivations----- 18142
Promotions : Army general officer, policy, hearing----- 12006	Properdin, content in fish, USSR study----- 17817
farm products by agricultural groups----- 7571	Property : American-owned, expropriation by foreign governments in 20th century, report----- 18935
Pronghorn antelope----- 4949	assessed values for taxation----- 152
Pronko, Eugene, current research and development in scientific documentation----- 11261	minimum standards for urban renewal rehabilitation----- 13913
Propaganda, enemy, defense against, DA pamphlet----- 13238	tax, role of States in strengthening taxable values, census of governments, 1962----- 15035
see also Communism.	announcement and order form----- 15032
Propagation, turbulent Bunsen flames----- 1197	see also Enemy property—Personal property—Public property—Real estate—Surplus property.
Propellants : earth orbital vehicle in useful orbit between 2 specified altitude limits----- 16383	Property accounting, see Accounts and accounting.
liquid-----	Property rights, family and property law, women, Wyoming( summary----- 9514
handling and storage----- 13834	Property standards, see Mortgage insurance.
sloshing in toroidal tanks, frequencies and forces resulting----- 12858	Prophylaxis : calisson disease, translations from Russian book----- 12680
space vehicle propellant tank, determining mass in zero gravity----- 7259	infectious diseases, prophylaxis and its improvement, USSR study----- 2607
errata----- 12850	Prophylaxis pastes, see Dentrifices.
propagation velocities, electrical method for continuous measurement----- 9133	Proportional counter spectrometers, see Spectrometers.
rocket-----	Proprietary stores, see Stores.
liquid-vapor interface configuration, effect of surface energy during weightlessness----- 5590	Propulsion : air-turbo-rocket engine performance, aircraft, nuclear powered supercritical-water cycle, analysis----- 7230
liquid-vapor interface during weightlessness, effect of contact angle and tank geometry----- 21004	chemical rocket, papers----- 5547
safety, covering laboratory, pilot plant, and production operations----- 1373	electric-----
sloshing, effect on stability of accelerometer controlled rigid space vehicle----- 20982	sodium flash-vaporization facility, design, etc----- 11041
solid-----	spacecraft, papers----- 5550
combustion, effect of composition during rapid pressure decrease----- 1314	machinery for U.S.S. Enterprise, overcharges by Westinghouse Electric Corporation, GAO report----- 19283
development of large boosters----- 6203	nuclear-----
ignitability with chlorine trifluoride----- 3144	aircraft, 3 cycles----- 5511
space vehicles and booster stages liquid oscillations, slosh damping----- 12860	convective heat transfer in rocket nozzle----- 18141
tank material and rocket fuels or oxidizers, chemical reaction between them when impacted by small high-velocity projectiles----- 16393	manned aircraft, program of Atomic Energy Commission and Defense Department, GAO review----- 6534



	Entry		Entry
Propulsion—Continued		Protective shelters—Continued	
nuclear—continued		fallout—continued	
orbit-launched vehicle design, etc.,		design and analysis.....	18717
for escape and planetary mis-		equivalent building method of	20376
sions.....	12849, 19908	fallout radiation shielding.....	20376
single-cavity vortex gaseous rockets,		do we need them, etc.....	10129
performance capability.....	11023	emergency housekeeping.....	10142
nuclear propulsion conference, pro-		farm shelter and storage areas,	
ceedings, Aug. 15-17, 1962.....	18592	farm building plan.....	36
nuclear rockets—		home, factors in building.....	10141
optimizing nozzle performance....	9154	how would we know when to go	
papers.....	5548	to shelter and when to come	
perigee, for orbital launch.....	1325	out?.....	10130
systems—		low-cost sanitation systems, in-	
lunar landing considerations.....	5610	vestigation.....	19141
orbit-launched vehicles, influence		national survey.....	10145
of weight parameters.....	11020	protection against radiation in	
turbine-geometry characteristics for		simple structure.....	16861
alkali-metal turboelectric space		radiation protection, evaluation	
power systems.....	11047	in Los Angeles area.....	5928
Propylene, absorption and photoliza-		schools—	
tion coefficients in vacuum		guide for administrators.....	4608
ultraviolet.....	19898	national design competition	
Prosecutors, see Public prosecutors.		awards.....	9740, 13317
Prospecting:		rural families emergency protec-	
contributions to geochemical pros-		tion plans.....	10143
pecting for minerals.....	17521	fallout shelter program—	
electric—		hearings.....	11882, 15300, 17163
rational profiling of isochrons for		reports.....	17133-134
maps, USSR study.....	6729	fallout shelter supplies, etc., for	
sounding by method of extraction		care of—	
of fields, USSR study.....	6696	infants and children.....	11642
electro, 2-frequency inductive, meas-		newborn infants and mothers....	11643
uring instruments, USSR		incorporation into schools.....	9739
study.....	12355	management, instructor's guide....	4606
geological, geophysical, and geo-		parking garage, blast resistant com-	
chemical methods at Malachite		munity shelter, underground	
mine, Jefferson County, Colo.,		type design.....	13318
comparison.....	17521	personal and family preparedness	
geophysical methods of exploring		for survival.....	11656
for buried channels in Monu-		structures, design series.....	11655, 13318
ment Valley area, Arizona and		weather instrument shelter for	
Utah.....	597	plant disease investigations....	15565
ore deposits, hydrochemical meth-		Yards and Docks Bureau, studies....	18236
ods.....	10803	Protective Structures Division, pro-	
see also Explorations.		fessional guide PSD-PG (se-	
Prostheses:		ries).....	1934,
evaluation in vascular alloplasty,		4607, 9739, 16935,	18716
USSR study.....	18012	Proteinases, type B Cl. botulinum	
orthopedics, traumatology, and		proteinase, isolation, etc., USSR	
prosthetics (USSR periodical),		study.....	5109
translations.....	15781	Proteins:	
progress in prosthetics.....	1588	analysis, 3d symposium, Quedlin-	
step into action, guidebook for		burg, Germany.....	17634
above-knee amputee.....	9356	biosynthesis, and nucleic acids,	
synthetic vascular, changes in		Communist Chinese study.....	15889
mechanical properties, USSR		blood substitute BK-8, infusion	
study.....	9003	during surgery, effect on coag-	
USSR, translations.....	12371	ulating blood system, USSR	
Prosthetics and prosthetics manufac-		study.....	16157
ture (USSR periodical):		content of some mass Black Sea	
translations.....	15737	planktonic algae grown in cul-	
Protect your family against poison-		tures.....	17738
ing.....	8287	cottonseed, for animal and man,	
Protection of Industrial Property, In-		proceedings of conference.....	1655
ternational Bureau for, see In-		dietary, influence on fatty acid	
ternational Bureau for Protec-		composition of plasma and liver	
tion of Industrial Property.		lipid components.....	1811
Protective clothing, see Clothing.		Eastern Utilization Research &	
Protective coatings, see Coating ma-		Development Division basic re-	
terials.		search.....	11442
Protective Labor Legislation Commit-		industrial uses, Northern Regional	
tee, report.....	20081	Research Laboratory, publica-	
Protective shelters:		tions and patents, 1936-61,	
apartments and office building, in-		list.....	5798
corporation into.....	1934	intake and cold exposure, effect on	
blast resistant, dual purpose school		liver enzymes associated with	
and community shelters, base-		amino acid metabolism.....	11502
ment type design.....	11655	metabolism alterations during cold	
components catalog.....	4607	acclimation.....	11501
professional guide series.....	16935	monolayers, structure and surface	
fallout—		properties.....	18245
architects and engineers qualified			
in analysis, directory.....	7777, 18713		
dairy barn, farm building plan....	20288		

# INDEX 1963

	Entry		Entry
Proteins—Continued		Psychology—Continued	
synthesis—		clinical, opportunities for graduate students in Army Medical Service	117
cell, nucleotide code and regulation, USSR study	6884	engineering, central problems, USSR study	5408
muscle repair, USSR study	17984	human factors research, bibliography	18487
RNA, and genetics, relationship, USSR studies	17992	medical conference on research methods, USSR	16177
<i>see also</i> Lipoproteins.		military small group performance under isolation and stress, critical review	1762-66
Protestant lay leader resource guide	16456	problems of psychology (USSR periodical)	933
Proteizirovaniye i protezostroyeniye (periodical):		psychic control and regulation in automata, analysis, USSR study	10801
translations	15737	psychological sciences, conference on status, tasks and prospects in Bulgaria	12440
Prosthesis, <i>see</i> Dentistry.		social—	
Protons:		materialistic question, USSR study	12378
calibration of semiconductor detector pulse-height response	11514	USSR translation	12316
40 and 440 Mev, irradiation effects on transistors	5574	USSR psychological reports	3002
low energy—		USSR, translations from Voprosy psikhologii	12705
from 0.1 to 5 Mev, at 12 earth radii during sudden commencement of magnetic storm, Sept. 30, 1961	9175	work activity of man and technical progress, USSR study	5242
geomagnetically trapped, anomalous component	7285	<i>see also</i> Personality.	
quiet-time belt, magnetic field	7284	Psychoneuroses, <i>see</i> Neuroses.	
range-energy relations in Al, Si, and SiO <sub>2</sub>	12952	Psychopathy, <i>see</i> Mental diseases.	
solar, rocket observations during Nov. 1960	21013-14	Psychopharmacology:	
Providence, R.I.:		abstracts	13023
area redevelopment manpower report	17402	central nervous system effects, animal research, bibliography	21093
electric facilities of area, map	516	handbook	21093
occupational wage survey—		Psychophysiology, color discrimination, psychophysical methods of determining spectral wavelength	9105
departmental edition	16281	Psychosis, <i>see</i> Mental diseases.	
document edition	15172	Psychotics, <i>see</i> Mentally ill.	
T. F. Green Airport, weather observations, hourly, decennial census	11400	Psychrometers, <i>see</i> Hygrometers.	
Prunes, production, use, value, by States, 1961-62	16615	PT boats, operations in Navy during World War II, at close quarters	5653
Pruning:		Ptolemaeus, LAC 77, lunar chart	13211
red pine plantation, healing time for wounds	15571	Public accommodations, <i>see</i> Civil rights.	
southwestern ponderosa pine, heavy pruning reduces growth	17489	Public accounting, <i>see</i> Accounts and accounting.	
Psammochoridae, <i>see</i> Wasps.		Public administration:	
PSD-PG series—		business and public administration	
4607, 9739, 16935, 18716		BPA notes	363, 3486
Psychiatric clinics, <i>see</i> Clinics.		selected Office of Education publications concerning public administration and related fields	8184
Psychiatric disorders, <i>see</i> Mental illness.		Public Affairs Bureau, general information	16571
Psychiatric institutions, <i>see</i> Mental institutions.		Public assistance:	
Psychiatric patients, <i>see</i> Mentally ill.		aged, Federal financial assistance programs	11411
Psychiatry:		applicants, D.C. Unemployment Compensation Bd. to advise D.C. Welfare Dept. as to status, report	13626
biological research, need for broadening, USSR	16003	blind, under social security act—	
clinics, reporting outpatient services, instructions	11104	cases, reasons for opening and closing	4876, 19156
crew interaction in SAM 2-man space cabin simulator	18500	caseworkers, analysis of appointments	20745
personality and neuroses, USSR study	12486	child welfare programs, problems and services	13311
psychiatric disorders, treatment with metrazol, bibliography	16517	dependent children and their families, 4 in every 100 get AFDC	20655
Public Health Service careers	9220	eligibility requirements, yearstick for need	17415
training of mental health personnel, survey of funding and expenditures, 1960-61	12908-909	Federal welfare activities coordinated with education and housing	12058
<i>see also</i> Mental diseases.			
Psychological warfare, tactical leaflet disseminator (air-ground)	7485		
Psychologists, counseling, vocational rehabilitation and education, examination announcement, amendment	9744		
Psychology:			
and astronautics, USSR study	15805		
Behavioral Sciences Laboratory reports, bibliography	18485		

	Entry		Entry
Public assistance—Continued		Public health, <i>see</i> Health.	
medical care, guides, etc.—		Public Health Department of District	
dental services.....	8200	of Columbia:	
optical services.....	8201	mental health followup project,	
organization and administration.....	8202	report.....	12040
pharmaceutical services.....	13891	venereal diseases, immediate treat-	
programs, families receiving aid to		ment of minors upon their own	
families with dependent chil-		consent—	
dren, cost standards used by		hearing.....	10008
States, Jan. 1961.....	3328	law.....	20426
public assistance report.....	2235	reports.....	6159, 13786
special types, program facts.....	10095	Public health educators, <i>see</i> Educa-	
State maximums and other methods		tors.	
of limiting money payments to		Public health nurses, <i>see</i> Nurses and	
recipients.....	10096	nursing.	
State salary ranges of positions of		Public health schools:	
public welfare.....	616	expand facilities and program for	
statistics, monthly advance release.....	3418	training—	
welfare expenditures, public and		hearings.....	6199, 17326
private, estimates for 1961-63.....	3330	law.....	18776
welfare services—		summary.....	19335
families living in public housing.....	19339	reports.....	6180, 7945, 17283
planning for community needs.....	19333	Federal support.....	12992
welfare in review (periodical).....	18369	offering traineeships for full-time	
Public buildings:		academic study, 1963-64, list.....	13025
air conditioning equipment, repeal		Public Health Service:	
portion of act of 1943—		act, amend—	
hearing.....	17184	hearings.....	2053, 9939, 11908
law.....	17048	law.....	15150
reports.....	13715, 17105	reports.....	11828, 11967
construction, extension, etc., pros-		Advisory Committee on Public	
pectuses, 1963, hearing.....	8129	Health Service Personnel Sys-	
fallout shelter requirement—		tems, report.....	7411
hearings.....	11882	air pollution program.....	3273
reports.....	17133-134	appropriations, 1964—	
GSA, design and construction pro-		hearings.....	9924
gram.....	17516	law.....	15158
mint facilities, additional—		reports.....	7939, 11951, 13616
hearings.....	8093, 17184	career opportunities for college	
law.....	17032	graduate.....	12984
reports.....	9978, 15266	careers in psychiatry.....	9220
<i>see also</i> names of buildings or		certification of interstate milk ship-	
places where located.		pers under State-PHS coopera-	
Public bulletins, Census Bureau.....	169,	tive program.....	16516
7748-49, 7766, 9713		commissioned officer residency de-	
Public contracts, <i>see</i> Government		ferment program.....	14658
contracts.		conference with State and terri-	
Public debt:		torial health officers, proceed-	
changes in structure of Federal		ings.....	18290
debt.....	8258	Dental Public Health Personnel	
continuation of present ceiling—		Service, general information.....	7406
hearings.....	8015, 15337	drinking water standards.....	3296
law.....	17036	engineering careers.....	16495
reports.....	15272, 15277, 17245	environmental health activities.....	12989
increase in ceiling—		film catalog.....	16518
hearings.....	12015, 20507	grants and awards, guide.....	19964
law.....	11722	grants and awards, 1962 funds—	
need to extend and raise tempo-		health services, formula and	
rary limit (statement).....	21149	project.....	9229
reports.....	9890, 9895, 11956	mental health training.....	9228
Treasury Department circulars.....	1573-75,	research.....	9227
7488-93, 11354-355, 13103-104,		construction of cancer research	
14758, 16637, 20211-213.		facilities, etc.....	11109
Public defender:		training grants, traineeships, fel-	
provide for representation of de-		lowships, etc.....	21034
fendants in criminal cases—		grants and awards, 1963 funds—	
hearings.....	13815, 15322	construction of health research,	
reports.....	13762, 20472	hospital and medical facilities.....	21036
Public Documents Division:		research.....	21035
classification system.....	9329	grants-in-aid administered by State	
price lists.....	1393-98,	and territorial health authori-	
3263-67, 5679-82, 7393-94,		ties, directory, 1963.....	14659
9331-35, 11220-225, 12978-981,		health information leaflets and	
14653-656, 16490-491, 18277-		pamphlets, list.....	20105
281, 20086-87, 21078.		health research facilities construc-	
Public domain, <i>see</i> Public lands.		tion program—	
Public education, <i>see</i> Education.		GAO review.....	2326
Public employment, <i>see</i> Employment.		Surgeon General's report.....	13457
Public funds:		hospital research grant program,	
special deposits of public money.....	11352	administrative weaknesses,	
USSR—		GAO review.....	19288
collective for consumption, new		hospitals—	
literature on economic nature.....	2610	careers for physical therapists.....	9347
National consumption planning.....	767	medical internships.....	20107

# INDEX 1963

Entry	Entry
Public Health Service—Continued	Public Information—Continued
hospitals—Continued	scientific and technological communication, organization and coordination of information..... 18275
occupational therapists, career in medical care programs..... 9346	specialized science information services in U.S., survey..... 9683
Indian health program..... 11239	systems, design, management and use, Federal plans for improvement, hearings..... 12017
free medical services to individuals able to pay and inadequate rents for employee housing, GAO report..... 12206	use of outside information in small firms..... 1466
review, hearings..... 15314	Vietnam, U.S. problems, report..... 18871
mission and organizations, background material..... 18949	Public interest in uncongenial interbank relations..... 10182
national water quality network..... 21091	Public Land Law Review Commission, establish, hearings..... 18946
physicians..... 13021	Public lands:
public advisory groups—	acquisition of additional lands for future needs (address)..... 6575
authority, structure, functions..... 18288	Clark County, Nev., sell for use as privately owned golf course, report..... 15317
roster of members..... 9352	code of Federal regulations..... 6419
publications—	community recreation and public domain..... 17547
interim list..... 16510	eligibility for selection by Utah as indemnity for lost school lands, opinion of Attorney General..... 9020
selected list..... 12997	exchange, authorize, hearings..... 19060
radiological health activities, highlights, 1958-62..... 12996	general information..... 9083
research grant programs, guide for applicants..... 16426	gifts, authorize acceptance, hearings..... 19060
research grants and awards of N.I.H., 1961 index..... 11111	history of administration..... 10924
study effects on health of discharges from motor vehicle exhausts, hearings..... 11907	hydrology of public domain (series)..... 2352, 5026, 5028, 6561
Surgeon General's Ad Hoc Committee on Mental Health activities, report..... 9224	Interior Department decisions, digest..... 20749
Surgeon General's conference on health communications, Nov. 5-8, 1962..... 9358	landmarks in management..... 3043
traineeship program for professional nurses, short-term training courses..... 5695	laws—
see also Pay, allowances, etc.	exchange of correspondence concerning policy review..... 6197
Public housing, see Housing.	need for revision (addresses, etc.)..... 18947
Public Housing Administration:	legislative jurisdiction on certain Federal enclaves, adjustment, hearings..... 20609
air travel by personnel, GAO review..... 590	National Wilderness Preservation System, establish—
eligibility requirements, rents, and occupancy of selected low-rent housing projects, GAO review..... 10264	hearing..... 8118
installation of unnecessary equipment for measuring electricity and gas consumption in low-rent housing projects, GAO report..... 12205	report..... 8060
local authorities participating in low-rent programs..... 16540	nonmineral-nonagricultural, classification and sale, hearings..... 2051
low-rent housing projects, undue increases in Federal contributions resulting from method of financing off-site community facilities, GAO review..... 17511	our public lands (periodical)..... 3998
personnel, leave, and travel policies applicable to non-Federal employees in low-rent public housing program, GAO review..... 2328	range and forest lands resource conservation areas, BLM program (remarks)..... 5462
Public housing program for senior citizens, fact sheet..... 9363	review, hearings..... 17171, 18946
Public information:	statistics, 1962..... 5462
availability from Federal departments and agencies, news media panel discussion, hearings..... 13650	use and disposal, hearings..... 17171, 18946
Government information plans and policies, hearing..... 13650, 17169	see also Grazing—Homesteads—
human information processing, some peculiarities, USSR study..... 6876	School lands—also names of States, etc., where lands are located.
interagency coordination, hearings..... 12017	Public Lands Appeals Board, establish, hearings..... 17314
Post Office Department, PI series..... 9325-26, 12971	Public law 480, see Agricultural trade development and assistance act of 1954.
science, responsibilities of technical community and Government in transfer of information..... 5677	Public laws, see Law.
scientific, activities of Federal agencies..... 12935	Public libraries, see Libraries.
	Public management, see Administrative management.
	Public moneys, see Public funds.
	Public opinion and attitudes about mental health..... 19968
	Public papers of Presidents of United States..... 524, 13932, 19200
	Public printing and binding:
	paper specification standards..... 6210
	regulations..... 8016
	Public property:
	administration, Navy handbook, revised pages..... 9301

# JANUARY-DECEMBER

	Entry
Public property--Continued	
code of Federal regulations.....	4924
Federal property and administrative services act, amend. reports.....	11953, 18890
maintenance of grounds, engineered performance standards--	
formulas.....	11421
handbook.....	11422
Public prosecutors, North Vietnam, strengthening legality and activities, translations.....	15682
Public relations:	
role in marketing U.S. as tourist destination (remarks).....	5763
telling the Marine Corps story, recruiters manual.....	18058
Public roads, <i>see</i> Roads and highways.	
Public Roads Bureau:	
career opportunities engineers.....	3302
design of interstate system for traffic forecast to 1975, GAO report on problems.....	12210
direct Federal highway construction programs in eastern U.S., interagency problem areas and deficiencies, GAO report.....	19282
electronic computer program, library memorandum.....	9364
Federal-aid highway program, right-of-way of activities in Virginia.....	12214
films available.....	3301
press releases.....	4089
principal publications, list.....	7415, 14681
report, 1961.....	5699
right-of-way training program.....	11251
Public schools, <i>see</i> Schools.	
Public social welfare personnel, 1960.....	14803
Public utilities:	
coordination with Government in atomic power program (remarks).....	4499
general rules and regulations under public utility holding company act of 1935.....	18300
holding companies, security transactions and holdings.....	3985
records, preservation, regulations.....	10164, 20676
water, adequacy, 1959.....	13257
Public Utilities Commission of District of Columbia, report, 1961.....	350
Public welfare:	
aid to families of dependent children, eligibility sampling, Jan.-Apr. 1963.....	20746
position in Nation's economy (address).....	20932
<i>see also</i> Social work and problems.	
Public works:	
accelerated program--	
approved projects, directory.....	7654
maximum grants-in-aids for eligible areas.....	16815
supplement.....	4430
acceleration act, SCS conservation and watershed programs.....	1507
acceleration areas, map.....	16818
Alaska, amend act to authorize settlement of claims, report.....	17251
appropriations, 1964, hearings.....	15299, 17162, 18920
code of Federal regulations.....	4924
Engineers Corps, civil works activities--	
finance and fiscal accounting and reporting, manual, change.....	2209
report, 1962.....	
departmental editions.....	8192, 13876
document editions.....	7846, 13454

	Entry
Public works--Continued	
maintenance, engineered performance standards--	
general formulas, all crafts.....	1607
handbook.....	11422
janitorial handbook.....	1608
masonry formulas.....	9519
masonry handbook.....	11420
moving rigging handbook.....	1609
pipelitting plumbing handbook.....	1610
roads, etc., pest control formulas.....	11421
planned, advances for reserve, Federal laws.....	6573
pumping stations for flood protection projects, mechanical and electrical design, engineering manual.....	4861
Public Works Committee, House:	
calendar.....	3842
committee print.....	17186
hearings.....	300-303, 2057, 13667-668, 15330-331, 17183-185
investigations and studies--	
authorization, report.....	6107
expenses, reports.....	6131-32
reports.....	9860, 9912, 13602, 13604, 13615, 13623, 13629-631, 15236, 15242, 15247-249, 15258-260, 15266-267, 15287-288, 17105-106, 18860-861, 18872-873, 18905-907, 18909.
Public Works Committee, Senate:	
additional staff and funds, reports.....	4767, 6267
calendar.....	3860
committee prints.....	2104-6, 17333
hearings.....	8129, 10024, 13821-824, 17330-332, 19068
legislative activities, summary, 87th Congress.....	2106
reports.....	4767, 13703-715, 13777-779, 17250-256, 19018
Public Works Week, National, <i>see</i> National Public Works Week.	
Publications, Federal item identification guides for supply cataloging, supplements.....	3659
<i>see also</i> Government publications, also names of departments, etc., issuing publications--also subjects.	
Publishing:	
Industry--	
books, outlook for 1963 and review of 1962.....	4538
periodicals, outlook for 1963 and review of 1962.....	4544
report.....	4107
Pucallpa, Peru, petroleum resources and uranium possibilities of region.....	14098
Pueblo Indians:	
Isleta paintings--	
departmental edition.....	93
document edition.....	220
Sia Pueblo, N. Mex. bulletin--	
departmental edition.....	4428
document edition.....	4670
Puerto Ricans in U.S., social and economic data, census of population, 1960.....	15083
Puerto Rico:	
agriculture department, directory, 1963.....	7529
amateur alien radio operators, authorization to operate--	
hearings.....	19049
report.....	19025
census of business, 1958, retail, wholesale and selected service trades.....	13303
census of housing 1960, tenure, rent, plumbing, etc.....	18099



# INDEX 1963

	Entry		Entry
Puerto Rico—Continued		Pulp wood, <i>see</i> Wood pulp.	
census of population, 1960—		Pulpboard:	
detailed characteristics.....	1921	current industrial reports.....	3574, 18684
social and economic characteris-		4584, 18684	
tics.....	1882	hardboard, general information.....	7731
climatological data.....	3517	hardboard industry, outlook for	
coast pilot.....	1957	1963 and review of 1962.....	4530
county business patterns, activities		particleboard—	
covered by OASDI program.....	16889	current industry report.....	16898
District Court, tenure of judges,		industry, outlook for 1963 and re-	
report.....	6171	view of 1962.....	4526
education and citizenship in public		wood, Maine's potential for man-	
school system, interim report.....	11893	ufacture.....	1472
export expansion opportunities (re-		Pulpwood, <i>see</i> Wood pulp.	
marks).....	20390	Pulse analyzers, plotting erythrocyte	
5B redevelopment area, statistical		volume spectra, calibration.....	20337
profile.....	15132	Pulse-code-modulation-frequency-shift	
military personnel of U.S. ordered		system, signal-to-noise charac-	
to, helpful hints, DA pam-		teristics.....	9212
phlet.....	16825	Pulse counters, USSR industrial de-	
mineral industry, minerals year-		velopment, translation.....	15848
book chapter.....	19852	Pulse generators:	
minimum-wage status.....	14805	Hewlett Packard 212A and AN/	
nurses in public health, number and		PPM-1, test instrument call-	
educational preparation.....	3295	ibration procedure.....	9282
political status, settlement—		TS-592A/UPM-15, etc., Navy call-	
hearings.....	13654	ibration program, technical	
reports.....	18885, 20469	manual.....	9292
population, estimates.....	11633, 18691	Pulses:	
principal electric facilities, map.....	523, 2266	neutron application to power reac-	
solar radiation used to dry ma-		tor start-up procedures, devel-	
hogany lumber.....	8296	opment.....	1831
storm warning facilities chart,		radar range calculation.....	12957
1963.....	11385	changes and additions list.....	18232
tree diameter growth in dry lime-		Pumice, minerals yearbook chapter.....	18091
stone hills.....	8294	Pumped storage for hydroelectric	
United States trade, monthly		power, selected list of refer-	
trade.....	3737	ences in English.....	7474
water resource development, map.....	14027	Pumping plants, <i>see</i> Pumping stations.	
ZIP code directory.....	20063	Pumping stations:	
Puerto Rico Reconstruction Adminis-		design and layout, engineering man-	
tration, records, preliminary		ual.....	4860
inventory.....	7307	local cooperation and general con-	
Puget Sound:		siderations in planning and de-	
Kingston Harbor, Wash., harbor		sign, engineering manual.....	4859
improvements, engineer re-		mechanical and electrical design,	
port—		engineering manual.....	4861
departmental edition.....	452	Pumpkins, growing.....	4350
document edition.....	222	Pumps:	
Pugh, Olin S., problems and prospec-		current industrial reports.....	13295
ts of South Carolina food		farm—	
processors.....	1474	current industrial reports.....	3574
Puglisi, Enzo A., welfare and pension		summary for 1962, current indus-	
plans, 1959-61.....	18020	trial reports.....	7755, 15060
Pugwash conferences, Soviet article.....	5238	Federal item identification guides	
Puillet, Gerard, relief.....	13475	for supply cataloging, supplе-	
Pullets, <i>see</i> Chickens.		ments.....	3655
Pulmonary diseases:		impellers, method for design using	
chronic pulmonary insufficiency in		high-speed digital computer.....	3150
U.S., epidemiologic view.....	3280	industry outlook for 1963 and re-	
22d research conference, transla-		view of 1962.....	4532
tions.....	20221	pumping sampler with alternate	
Pulp:		suspended-sediment handling	
aspen, semichemical corrugating,		systems, investigation.....	14050
bleachability.....	19267	Punched card systems, research use	
current industrial reports.....	3574, 18684	in study of problems relating	
4584, 18684		to tekites.....	3167
change.....	4579	Pupils (students), <i>see</i> Students.	
industry—		Purcell, Rex B., automatic film den-	
report.....	4121	sity reading system.....	11560
technological change and auto-		Purchasing:	
mation—		Agricultural Stabilization and Con-	
departmental edition.....	1177	servation Service, reports.....	4122-23
document edition.....	282	consumer and industrial buying,	
<i>see also</i> Wood pulp.		new indicators to motives, etc.	
Pulp mills:		(speech).....	11688
automation, impact, 1947-60.....	1185	consumer buying intentions—	
industry wage survey—		quarterly reports.....	6003, 11635
departmental edition.....	1170	series.....	6003, 11635, 16900
document edition.....	275	survey.....	529
opportunities for development in		consumer purchases of citrus and	
western Colorado.....	4992	other juices by family charac-	
		teristics.....	353

	Entry		Entry
Purchasing—Continued		Quantitative analytical procedure	
Government directory	1493	for determining glutaraldehyde	
Government guide for business-		and chrome in tanning solu-	
men	531	tions	7547
Institutional meat purchase speci-		Quantum generators and death rays,	
fications approved by USDA,		USSR	17901
pork products, cured and		Quantum mechanics:	
processed	16706	charge exchange cross sections for	
Ohio's sawmills, buying practices,		adiabatic collisions, varia-	
1955-58	6481	tional approach to calculation	12853
pooled buying lowers costs for farm-		reciprocity	18160
ers	6383	Quarantine:	
retail store buying, bibliography	9385	important requirements of foreign	
surplus personal property, how to		countries for logs and lumber	1653
buy from Defense Dept.	10040	plants, etc., requirements for in-	
Purse seines, <i>see</i> Fish nets		terstate movement, guide	5802
Putnam, P. A., feeding pelleted ra-		<i>see also</i> subjects.	
tions to beef cattle	4375	Quarantine inspectors, trainee, exam-	
Puzak, P. P.:		ination announcement suspen-	
explosion tear test studies of high-		sion notice	20386
strength Q&T steels	12953	Quarantine stations, lepidopterous	
NRL drop-weight test	11173	larvae intercepted, keys for	
Puzewicz, Zbigniew, maser-research		identification	13155
scientist, Polish study	8823	Quarries and quarrying:	
Pyridine nucleotide oxidases and		automotive transport, planning,	
transhydrogenase in acclimatiza-		etc., USSR study	15843
tion to high altitude	4410	Injury experience—	
Pyrites:		1959	16322
coal mine, oxidation	14512	1960	14499
minerals yearbook chapter	19880	plts and quarries, selection and	
Pyrometallurgy, <i>see</i> Metallurgy		operation, technical manual	14947
Pyrophosphates, effect on perform-		vibrations from instantaneous	
ance of topically applied aque-		and millisecond-delayed quarry	
ous stannous fluoride in preven-		blasts	5479
tion of enamel decalcifica-	79	<i>see also</i> Limestone.	
Pyrophyllite, minerals yearbook chap-		Quarterly:	
ter	18109	NOTE:—For all publica-	
Pyrotechnics, safety, covering labora-		tions which began with the	
tory, pilot plant, and produc-		word "Quarterly" ( <i>see</i> sub-	
tion operations	1373	ject, or name of department,	
		etc., issuing publication.	
Q		Quartermaster Corps of Army:	
Q.M.C., <i>see</i> Quartermaster Corps of		historical studies	3306
Army.		inspection, 1946-56	3306
QMC, <i>see</i> Quartermaster Corps of		research and development liaison	
Army.		with Agriculture Dept., prog-	
Quacks and quackery:		ress report	7417
affecting older citizen, hearings	8089	Textile Engineering Laboratory re-	
fake medical devices, FDA report	20690	ports	11252-253
Quadrennial supplement to cumulative		textile series report	3307
index of congressional commit-		Quartermaster Food and Container	
tee, hearings	13387	Institute of Armed Forces, li-	
Quadruplegics, talking books, hearing	18945	brary bulletin	9368
Qualifications for astronauts	2061	Quaternary period:	
Qualified products list, <i>see</i> Quality		deposits and fossils in relation to	
control—Standards and stand-		geomorphology, Front Range,	
ardization.		Colo	10290
Quality assurance provisions for in-		deposits, west-central Oregon, min-	
spection agencies	1263	eral resources study	5015
Quality control:		geology and geomorphic history,	
and reliability, technical report	8142	Kassler quadrangle, Colo	10290
bibliography	18626	Quarters:	
DSA civilian career program	15408	Veterans Administration—	
Navy, specifications, standards, and		employees, rental charges, GAO	
quality products lists, guide	21063	review	2332
promote through protection of trade		housekeeping, Los Angeles, reno-	
marks, etc.		vation, GAO review	5007
effects of bill, summary-analysis	20449	Quartz:	
hearing	13660	crystal, electronic-grade, minerals	
report	15232	yearbook chapter	16329
sampling procedures and tables for		junction with metal, USSR study	6999
life and reliability testing based		Quartzite, flotation of kyanite-quartz-	
on Weibull distribution	8142	ite rock, Graves Mt. Ga.	16338
Quality program provisions for space		Quebec, Silurian corals from Lake	
system contractors	1264	Témiscouata and Lake Mata-	
Quality publication NPC 200 ( <i>see</i>		pedla areas	6556
ries)	1263-65	Queens County, N.Y., southeastern,	
Quality Seafood, Inc., relief	13508,	geology and ground-water con-	
19001, 20415		ditions	12234
Quan doi nhan dan (periodical):		Queisser, Hans J., failure mechanisms	
translations	5339	in silicon semiconductors	11513
		Questions and answers on agricultural	
		research	13163
		Questions and answers on arms con-	
		trol and disarmament	18938

# INDEX 1963

	Entry
Questions of virology (USSR periodical):	
translations	12715
Questions on biophysics, biochemistry, and pathology of erythrocytes (USSR periodical):	
translations	10836
Quick, Clarence R., relation of canyon physiography to incidence of blister rust in central Sierra Nevada	2314
Quicklime, <i>see</i> Lime.	
Quicksilver, <i>see</i> Mercury.	
Quigley, Hervey C.: handling qualities and operational problems of large 4-propeller STOL transport airplane	5599
lateral-directional handling qualities of STOL transport airplane	11053
Quimby, Freeman H., proceedings of conference on spacecraft sterilization	1274
Quince, blight	14861
Quinn, Alonzo W., bedrock geology of Crompton quadrangle, R.I.	19299
Quinn, E. P., vibration of fuel rods in parallel flow	9676
Quitoriano, Asterio, relief	11766, 17212
Quon, J. E., volatility of human waste at elevated temperatures	18473
Quong, Joe, deportation suspension, rescission report	20592
Qureshi, Iqbal H., radiochemical separations by amalgam exchange technique	18600
<b>R</b>	
R.A.D.C., <i>see</i> Rome Air Development Center.	
R.E.A., <i>see</i> Rural Electrification Administration.	
R.E.P.A.S., <i>see</i> Research, Evaluation and Planning Assistance Staff, International Development Agency.	
Raabe, Herbert P., passive communication satellites with Lambertian surfaces	18144
Rabat, Morocco, United States, Embassy office building and ambassadorial residence construction, GAO review	14004
Rabbits: burn models used with isolated heating of skin, USSR study	17892
cold and warm acclimated, effects of adrenaline and noradrenaline on ear vessels	18470
ear, influence of ambient temperature on relation between skin temperature and blood flow	14907
Raber, M., wet steam as reactor coolant (CAN-2), etc.	4497
Rabies, health information series	21082
Race problems: District of Columbia, antidiscrimination regulations re sale or rental of private property, hearing	7991
education, deny federal assistance to institutions which practice racial discrimination—	
hearings	17168
report	18908
education, federally affected areas assistance, nondiscrimination amendment, report	13607
equality of opportunity (remarks)	12972
freedom to the free, 1863 century of emancipation 1963	4609
housing, open occupancy trends in low-rent public programs	21096

	Entry
Race problems—Continued	
miscellaneous civil rights proposals, hearings	18952
print additional copies, reports	20601, 20486
North Carolina equal protection of laws, North Carolina State Advisory Committee report	6021, 18719
public accommodations, eliminate discrimination, hearings	17304-305
Rapid City, S. Dak., discrimination against Negro airmen, report	6022
segregation in public schools—	
North and West	181
Southern States, 1962	1935
<i>see also</i> Discrimination in employment.	
Radar: airborne beacons, catalog prices, GAO examination	12200
airborne early warning search radars, unnecessary by Navy in procurement, GAO examination	8311
airborne observations for refraction by terrestrial atmospheres, charts of corrections	7596
airport surveillance, ASR facilities maintenance, handbook	19169
altimeters, unnecessary costs in procurement by Navy Dept., GAO report	17512
aurorae and airglow researches	3165
course, fire control technician training, trainee's guide	1367
display noise effect on pilot control of terminal phase of space rendezvous	16365
East Germany, use of technology in meteorology	969
electronic warfare principles, Air Force manual	51
equipment, electronic fundamentals, Air Force manual, change	5866
error analysis of naval space surveillance system	18229
FPS-16, tracking spherical balloon, method of measuring detail	11022
Government publications, list	21076
ground-radar method for calibrations of aircraft static-pressure systems	18163
meteor observation, USSR reports	10687
microwave link equipment, maintenance	13893
observations of Venus, USSR study	2551
probes of planet Mercury, USSR study	8570
publications, price list	16491
range calculation pulse-radar equations	12957
changes and additions list	18232
range calculation, USSR study	19441
stations indicator devices, USSR study	19563
Radar interference, protection against it, USSR study	2523
Radar simulators, land mass system, all altitude capability study	12947
Radar tracking: swept-wing fighter plane with director-type radar fire-control system and scope presentation, tracking performance	10971
systems—	
tri-service missile range instrumentation development program, NRL services	12954
VHF-UHF missile and space-research with 150-ft. steerable antenna	12950
RADC, <i>see</i> Rome Air Development Center.	

# JANUARY-DECEMBER

	Entry		Entry
Radcliffe, Shirley, teaching machines and programed instruction	20644	Radiation—Continued	
Radar, Georgia L., relief	18989	fish, annual report, Oct. 1961–Sept. 1962	18595
Radiant energy:		food irradiation—	
dependence determinations in 60–180 KeV range with X-ray machine of varying output	11558	Army program, review, hearing	15164
emitted and reflected—		Army's wholesomeness program, review	13246
angular distribution from diffuse asymmetric grooves	20992	preservation, bibliography	4553
from specular, gray, asymmetric groove	16390	preservation, biochemical aspects, USSR study	6640
radiant heat component, effect on heat transfer in vacuum sublimation	18179	research, international conference	14613
Radiation:		genetics, problems, USSR book	4472
accidents, medical aspects, handbook for physicians, health physicists and industrial hygienists	11559	hazards, contaminated soils	10135–136
artificial radiation belt made on July 9, 1962, characteristics, status report	9171	high temperature spectral emissivity of yttrium, samarium, gadolinium, erbium and lutetium oxides	14987
atomic, biological effects, bibliography	132	induced polymerization and graft copolymerization, international symposium, proceedings	136
beam, solutions for 3-dimensional equation of radiative transport	11176	injuries—	
belts near celestial bodies, USSR study	6673	acute, immunology, USSR study	8979
betatron and radioactive gold in treatment of brain tumors, USSR study	19388	treatment by transplantation of hemopoietic tissue, USSR study	17890
biochemistry, elements	7641	treatment of animals with combined radiation injuries, USSR study	10551
biological effects and problems of radioactive isotope distribution	1821	integral neutron thermalization, quarterly progress report	14968
blackbody, function, tables for wavenumber calculations	1739	interim interstellar radiation field	21019
coal, flash irradiation	14523	irradiated rabbits, histological changes in skin following homoplasty to burns, USSR study	2539
control—		irradiation—	
regulatory program, role of Texas (remarks)	1848	behavior of BeO-UO <sub>2</sub> fuel as function of fuel-particle size	14970
USSR research	8911	biochemical changes, USSR study	15932
cracking of hydrocarbons, radiation-thermal	18517	effects, copper oxidation, study	14964
damage to critical reactor components	11172	effects of 40 and 440 Mev protons on transistors	5574
detectors, radiobiologic problems	16795	effects on metabolism, USSR study	20764
devices, incidental and restricted, FCC rules and regulations	2258, 13906	harmful effect on fast neutrons and X-rays on mouse testis, comparison	20813
directional correlation attenuation coefficient tables for combined magnetic dipole and randomly oriented electric quadrupole interactions—		injury in testes of mature mice following embryonic exposure, USSR study	17902
spin of intermediate nuclear state 1-1 and 1-2	7712	loop studies of organic reactor coolants, progress report	14991
spin of intermediate nuclear state 1-3/2 and 1-5/2	7713	testing of ceramic fuels, summary report	18566
does nuclear weapons testing endanger our health?	10137	isotopes and radiation technology, review of recent developments	20332
earth, power input to small flat spinning plate from diffusely radiating sphere application to satellites	5580	marine biology, USSR studies	16264
earth's, experimental determination, USSR study	6677	model belt magnetic field numerically computed	1284
effects—		nuclear—	
in borides	14972–973	incorporation of shelter into schools	9739
on food and crops	10134	radiological defense text book	13319
on mammalian eye, literature survey	18591	partial cell irradiation, development of apparatus	16796
exposure—		pasteurization—	
automatic film density reading system	11560	food program, summaries of accomplishment, 2d annual contractors' meeting, 1962	15009
effects on human performance	5884	fresh fruit and fish (remarks)	18610
of animals, protection	10132	shrimp	11568
of animals to lethal doses	10133	pathoanatomical changes induced in lungs	9668
of livestock, how to care for them	10131	permeability disorders of histohematic barrier, role of neurohumoral mechanisms, USSR study	20784
fallout, protection in simple structure	16861	polymerization, USSR news	10569
		postirradiation hyperglycemia in primate	16800

# INDEX 1963

Entry	Entry
Radiation—Continued	Radiation illness—Continued
precision measurements and calibration standards, selected papers, errata-----	acute—Continued
9201	use of streptomycin in prevention of, USSR study-----
process development program summaries, contractors meeting-----	997
1839	biocenosis of intestinal microflora, effect on development, USSR study-----
proper feeding of tumor patients during treatment-----	2967
20880	chronic, clinico-morphological characteristics, USSR study-----
protection—	8512
against hazards in space, symposium, proceedings-----	experimental, tetracycline antibiotics-----
9687	19491
distribution and chemical forms of 2-mercapto-ethylglyanidine and bis(2-guanidoethyl) disulfide given orally to mice-----	hemoglobin, changes in physicochemical and biochemical properties-----
7637	2462
of mammals against, USSR studies-----	irreversible component, lowering immunobiological resistance of organism as manifestation, USSR study-----
17906	10853
2802	preirradiation prophylaxis and postirradiation therapy-----
123	4412
radiation and genetics, use of vital and health statistics-----	sodium gallate effect on nucleic acid content in organs, USSR study-----
1431	12445
radiational-chemical reactions, mechanism, USSR study-----	16103
14278	sodium lactate use, USSR study-----
radioactive well logging, application to ground-water hydrology-----	therapeutic and cytotoxic effect of antibodies and their role in pathogenesis, USSR study-----
14028	15674
safety and control manual-----	treatment with ACTH and adrenal cortical hormones, USSR study-----
1837	10767
safety considerations in preparation of license applications-----	14398
14951	USSR studies-----
14929	5111,
self-absorption, transition probabilities and level population densities determination-----	Radiation Medicine Centre, materials and equipment for establishing, agreement with India-----
20303	11308
space, effects on solar-cell power systems, handbook-----	Radiation monitoring, USDA radiological monitoring handbook-----
18130	13162
stability of organic fluids, progress report-----	Radiation sickness, <i>see</i> Radiation illness.
4493	
sub-sterilization doses, effects on storage life extension of soft-shelled clams and haddock fillets, final summary-----	Radiators, finned-tube configurations, heat-transfer characteristics--
4486	1279
1142	Radio:
thermal, incident on earth satellite-----	buoys, seismo-acoustic, for studying earth's crustal structure in Indian Ocean area, USSR study-----
3142	8784
use in control of insect pests of plants and animals, USSR study-----	10032
16059	fundamentals of, study guide-----
view of hurricane Anna from Tiros III meteorological satellite-----	geodetic operations, graphoanalytical method of constructing hyperbolic net, USSR study-----
9177	6943
Yugoslav regulations, etc., on nuclear affairs-----	Government publications, list-----
646	21076
<i>see also</i> Alpha particles—Blackbody—Ceramics—Cosmic rays—Gamma rays—Infrared rays—Ionizing radiation—Radiant energy—Radioactivity—Radio-protective agents—Solar radiation—Spectra—Thermal radiation—Ultraviolet rays—Van Allen radiation belts—X-rays.	12460
	20523
Radiation biology, <i>see</i> Radiobiology.	transmission and reception, fundamentals, Air Force manual, change-----
Radiation chemistry, <i>see</i> Radiochemistry.	5866
Radiation Council, <i>see</i> Federal Radiation Council.	utilization under national defense education act, news and reports-----
Radiation detection instruments: low energy gamma-ray detector for astronomy experiments-----	15452
9172	<i>see also</i> headings beginning Radio.
radiological monitoring, instructor's guide-----	Radio apparatus and appliances:
11654	alloys of rare metals with boron and silicon, applications, USSR study-----
<i>see also</i> Scintillation.	6832
Radiation illness:	AN/GRC-19 radio sets procurement, rejection of low bid by Army Electronics Materiel Agency, GAO review-----
acute-----	6536
in dogs, prevention and treatment with sodium gallate, USSR study-----	equipment and operation, FCC rules and regulations-----
12359	10120
morphological changes of nerves in animals, USSR study-----	generation and transmission of microwave energy-----
17662	7681
permeability of hematoencephalic barrier to inorganic phosphate, USSR study-----	production technology of radio-electronic equipment, USSR study-----
20920	19524
shifts in adsorptivity of tissue, USSR study-----	<i>see also</i> name of apparatus or appliance.
17655	
	Radio astronomy:
	atmospheric aspects, bibliography-----
	11100
	lunar occultations of radio sources, 1963-64-----
	21029
	lunar thermal emission measurements-----
	50
	measurements of 2 total eclipses---
	1738



# JANUARY-DECEMBER

	Entry
Radio astronomy—Continued	
optics of millimeter waves, USSR study	2520
solar bursts of spectral types 2 and 4, their relations to optical phenomena and geomagnetic activity	9386
studies	13199
survey	9605
USSR studies	2600
Radio broadcasting:	
advertising opportunities for small business report	2045
applications, FCC	3646
broadcast actions, reports	3646
emergency broadcast system, interim plan	15478
evaluation of recent developments (address)	10114
leadership or leadership (address)	2256
local live programming in prime time (address)	13905
Mexican agreement, report	20537
North American regional agreement, report	20537
program improvement, dependent on expressed public interest (address)	12097
public responsibility and journalistic function (address)	17428
radio aids, Atlantic and Mediterranean area	21054
ratings, methodology, accuracy, and use, hearings	17173, 18948
regulation, laws, codes or competition (address)	13904
services, FCC rules and regulations	488, 6397, 10118, 12099
standard, applications ready and available, lists	3646
see also Radio communication—Radio stations.	
Radio communication:	
antenna beam elevation angle for control of tropospheric interference between space system earth terminals and terrestrial stations	18192
applications, FCC	3646
attenuation during reentry, measurement (RAM), rocket used	7268
aviation, public safety, industrial and land transportation services, FCC rules and regulations	12100
aviation services, FCC rules and regulations	6399
binary systems using wideband signals	7595
computing maximum usable frequencies, USSR study	10698
data from radiotelegraph carriers' reports	3990
domestic, public services, FCC rules and regulations	8224
equal time for nominees for President and Vice President, suspend for 1964—	
hearings	9940, 17307
reports	11820, 11843
facilities for transmission of official messages, agreement with Guinea	16587
industrial radio services, FCC rules and regulations	13907
industrial scientific and medical service, FCC rules and regulations	2258
international fixed public services, FCC rules and regulations	8224
ionospheric F <sub>2</sub> layer's maximum usable frequency, monthly forecasts, USSR study	12335

	Entry
Radio communication—Continued	
laws of United States, compilation, safety and special radio services, FCC applications and actions	217, 3646
scatter wave radio facility, construction, agreement with China, Republic	1544-46
speech-intelligibility and talker-recognition tests of Air Force systems	9615
submarine rescue VHF/UHF transmitting buoy, electrical and radio design	11170
theory, structure of functions with limited spectrum etc., USSR study	8869
treaty matters, FCC rules and regulations	2258, 10117, 13906
tropospheric communication circuits, equipment characteristics and their relation to system performance	3176
VHF, in air transportation, Czechoslovakian study	12570
wideband adaptive communication system	9598
wideband systems, information transfer efficiency	7595, 9598
Radio direction finders, Rawin set AN/GMD-2 antenna, modification evaluation technique	5877
Radio engineering:	
abstracts pertaining to Communist China in Soviet journals	14377
USSR, news of higher educational institutions	745, 6671, 10753, 12490, 14345, 20796
Radio engineers, training, USSR studies	14401
Radio equipment, see Radio apparatus and equipment.	
Radio frequencies:	
above 30 megacycles per second, agreement with Canada	5729
allocations, FCC rules and regulations	2258, 10117, 10120, 13906
computing maximum usable frequencies, USSR study	10698
fading correlation bandwidth and short-term frequency stability measurements on high-frequency transaural path	5620
mutual interference between surface and satellite communications systems	16421
quarterly noise data	9209, 12900
signals with coincident frequency spectra, increasing receiver sensitivity, USSR study	10503
solar bursts, type IV, geomagnetic storms, and polar cap absorption (PCA) events	20132
see also Frequency meters.	
Radio frequency interference meter	18305
Radio frequency modulation:	
broadcast stations of world	15548
error rates in multiple FSK systems and signal-to-noise characteristics of FM and PCM-FS systems	9212
FM's past history, present status, and future (address)	4885
Radio in navigation, aids	7354-55, 14622, 18216
Radio interference:	
mutual interference between surface and satellite communications systems	16421
radio frequency interference meter	18305
shielding of internal combustion engines—	
catalog	9521
installation, etc., handbook	9520
Radio noise, see Noise.	

# INDEX 1963

	Entry		Entry
Radio operators:		Radioactivation analysis:	
amateur, alien, authorize to operate		literature search.....	16856
in U.S. and Puerto Rico—		neutrons, fundamentals and appli-	
hearings.....	19049	cations.....	20334
report.....	19025	rare-earth elements, Communist	
commercial, FCC rules and regula-		China.....	10562
tions.....	487, 2257	Radioactive isotopes, <i>see</i> Isotopes.	
radioman 1 & C, Navy training		Radioactive substances:	
course.....	16457	incidents involving AEC shipments,	
transmitter and receiver operator,		1957-61, summary.....	139
examination announcement.....	182	international traffic in materials	
Radio physics, <i>see</i> Radiophysics.		(remarks).....	9697
Radio propagation, <i>see</i> Radio waves.		northern seas, biological indicators	
Radio publications, price list.....	16491	of weak contaminations, USSR	
Radio ranges, <i>see</i> Omnidranges.		study.....	8902
Radio receivers, <i>see</i> Receivers (radio).		packaging and regulatory stand-	
Radio services, <i>see</i> Radio—Radio		ards for shipping, summary of	
communication.		report of AEC symposium.....	7710
Radio sets, <i>see</i> Radio apparatus and		radioactive probes, use in measur-	
appliances.		ing characteristics of snow-	
Radio signals, wideband, used in bi-		packs.....	19259
nary communications systems.....	7595	safety rules for working with radio-	
Radio spectrum, <i>see</i> Radio frequencies.		active materials.....	4475
Radio stations:		shipping and storage, literature	
amateur, alien, authorize to oper-		search.....	18588
ate in U.S. and Puerto Rico—		shipping containers, structural in-	
hearings.....	19049	tegrity, study of transport oper-	
report.....	19025	ations, etc.....	5941
amateur, exchange of messages on		toxicology, USSR study.....	20803
behalf of third parties,		uranium mills, waste characteris-	
agreement with Dominican Re-		tics.....	9351
public.....	16584	Radioactive waste disposal:	
broadcasting stations of world, in-		calcination, etc., of high level	
dexed by—		wastes in solid, stable media,	
country and city.....	15546	report of 3d working meet-	
country, city, and frequency.....	15548	ing.....	5946
frequency.....	15547	contributions to problems of radio-	
construction permits, etc., where		active waste disposal (series).....	10288,
interests of Congress are in-			14023
volved, hearings.....	19049	inorganic exchange materials, use	
educational, by State and city.....	10068	for waste treatment, meeting.....	7709
employees, exemption from over-		liquid in resin-in-pulp-type uranium	
time pay under FLSA.....	3396	milling flowsheet.....	3075
maritime services on land, ship-		organic matter and chemical, con-	
board, etc., FCC rules and		stituents accumulation and	
regulations.....	6398	cycling during early vegeta-	
Pacific Foundation, investigation,		tional succession on area.....	127
hearings.....	15396	uranium milling industry, guide.....	9350
print additional copies, report.....	15345	utilization as fuel for saline water	
quarterly radio noise data.....	9209,	conversion.....	12246
<i>see also</i> names of radio stations.	12900	vegetation studies related to move-	
Radio waves:		ment, basic data.....	1836
antennas and radio propagation,		vegetational history and plant suc-	
technical manual.....	11543	cession on area.....	127
antipodal focussing.....	18193	water supply and waste water sys-	
basic radio propagation predic-		tems, radioactivity detection	
tions.....	3476	and control.....	7523
centimeter range, effect on mouse		Radioactivity:	
fertility.....	19502	aeroradioactivity survey and areal	
directional scattering of UHF sig-		geology of—	
nals by meteor trails, USSR		Georgia nuclear laboratory area,	
study.....	6653	northern Georgia.....	11552
ionospheric, electron density pro-		Oak Ridge National Laboratory	
files of wavemotions in iono-		area, Tenn. and Ky.....	1827
sphere caused by nuclear deto-		aeroradioactivity survey and re-	
nations.....	13198	lated surface geology of Los	
ionospheric F <sub>2</sub> layer's maximum us-		Angeles region, Calif.....	5927
able frequency, monthly fore-		algal, USSR studies.....	8944
casts, USSR study.....	12335	atmospheric—	
radio propagation, journal of re-		and fallout research supported by	
search, National Bureau of		Division of Biology and Medi-	
Standards.....	3818,	cine, AEC.....	9689
9206, 11094, 12896		Washington, D.C.....	11153
reflection and transmission process,		beach, relationship to watershed	
plasma collision frequencies		geology.....	19132
proportional to energy.....	9211	beta activity in water, determina-	
scattering, profiles of electron den-		tion.....	8357
sity over magnetic equator ob-		contamination of aquatic media and	
tained using incoherent scat-		organisms.....	1822
ter technique.....	7312	deposition of matter from flowing	
<i>see also</i> Microwaves.		stream—	
		application to radioactive super-	
		heated stream system.....	18569
		general relations and equations.....	18568

# JANUARY-DECEMBER

	Entry
<b>Radioactivity—Continued</b>	
ejects studies-----	11574
fallout-----	
aerial survey, Project Sedan-----	14995
biological effects and radiation protection guides (paper)-----	1401
characteristics from deeply buried nuclear detonation-----	14995
civil aircraft-----	562
contamination of environment, USSR study-----	12497
current levels, Federal Radiation Council guidance-----	6409
fallout and your farm food-----	4368
in U.S. from nuclear weapons tests through 1962, estimates and evaluation-----	13924
livestock survival after nuclear attack-----	4369
meteorological evaluation-----	7715
monitoring fission products in atmosphere, intercalibration systems employed-----	11181
monitors, handbook-----	16934
nuclear attack effects upon soil and crops-----	4367
program, quarterly summary reports-----	14985
radiation standards and counter-measures, hearings-----	15163
tungsten in atmosphere, USSR study-----	6762
fallout shelters-----	
architects and engineers qualified in analysis, directory-----	7777
do we need shelter? what protection do we already have?-----	10129
emergency housekeeping preparations-----	10142
facilities on farms in Central and Southern States-----	13092
farm shelter and storage areas, building plan-----	36
home, factors in building-----	10141
low cost sanitation systems, investigation-----	19141
national program-----	
hearings-----	11882, 15300, 17163
reports-----	17183-134
national survey-----	10145
protection against radiation-----	16861
protection, evaluation of structures, Los Angeles area-----	5928
protection, shelter design and analysis-----	18717
rural families emergency plans-----	10143
school, national design competition awards-----	9740
school shelter guide-----	4608
shielding, shelter design and analysis, equivalent building methods-----	20376
when to go into them, etc-----	10130
fission product, in air along 80th meridian (west), 1961-----	16461
Galveston, Tex., area, ARMS-2-----	5930
hygienic significance in mining and concentrating of rare metal ores as factor in development of pneumoconiosis, USSR study-----	14268
land contamination by insects emerging from contaminated water bodies, USSR study-----	6885
measurement at Czechoslovak water works laboratories compared with foreign measurement technology-----	8750
nuclear bomb effects computer, including slide-rule design and curve fits for weapons effects-----	5929
procedures, manual, errata-----	3171
Project Sedan weather and surface radiation predictions-----	14994

	Entry
<b>Radioactivity—Continued</b>	
radiation, preparation of closed sources, Hungary-----	15763
radiochemical and physical measurements of debris from underground nuclear detonations-----	11578
rhodium-102 high altitude tracer experiment, stratospheric results-----	1732
sewage water containing natural radioelements, use in irrigation, USSR study-----	17813
thermoluminescent spectra of sodium chloride and hydroxide-free sodium chloride irradiated with 40 Mev alpha particles-----	9167
upper atmosphere, sampling by means of balloons, agreement with Australia-----	7439
use in diagnosis and treatment, USSR studies-----	19582
water supply and waste water systems, peacetime detection and control-----	7523
<b>Radioastronomy, see Radio astronomy.</b>	
<b>Radiobiologia (periodical):</b>	
translations-----	4473-74, 9667, 14953-956, 18561
<b>Radiobiology:</b>	
biological action of ionizing radiation, USSR studies-----	10009
cells in vitro, RNA content and degree of radioresistance, correlative study-----	9632
dosimetry, recommendations of International Commission on Radiological Units and Measurements-----	11095
laboratory experiments-----	15015
partial cell irradiation, development of apparatus-----	16796
problems, application of semiconductor radiation detectors-----	16795
radiation chemistry at Notre Dame (remarks)-----	16863
radioactive elements in body and their excretion-----	4469
research project, annual report-----	14993
selected chapters-----	18518
USSR Academy of Sciences, reports-----	7097
USSR periodical, translations-----	4473-74, 9667, 14953-956, 18561
<b>Radiocarbon, see Carbon isotopes.</b>	
<b>Radiochemical analysis:</b>	
methods of analysis of natural radioelements-----	5921
radiochemical analysis of water (series)-----	8357
separation procedures for strontium and thallium by amalgam exchange technique-----	18600
<b>Radiochemistry:</b>	
computer applications to nuclear and radiochemistry-----	9681
polyphenyl radiolysis products, analysis by gas chromatography and other methods-----	5948
radiation energy transfer mechanisms of chemical systems-----	9466
radiolysis of organic fluids, annual progress report, Oct. 1, 1961-Sept. 30, 1962-----	15013
techniques (series)-----	9681, 16849
<b>Radioelectronics:</b>	
abstracts pertaining to Communist China in USSR journals-----	1032, 8919, 12547-548
use in medicine and biology, USSR conference-----	2467
<b>Radlography:</b>	
autoradiographic method of studying mitotic cycle of bone marrow cells, USSR-----	20921

# INDEX 1963

Entry	Entry
Radiography—Continued	Radiotelegraphy, <i>see</i> Radio communi-
carbon and sulfur in titanium	cation.
crystallization of aluminum during	Radiotelemetric investigation of tem-
continuous casting, USSR	perature in human digestive
study	tract, USSR
industrial, AEC licensing guide	Radiotracer applications in electro-
Radiolabels, <i>see</i> Isotopes	metallurgical processing
Radiological defense textbook	Radium, dial-painters and progeny,
Radiological health, <i>see</i> Health	cytogenetic study
Radiological monitoring, <i>see</i> Radiation	Radkovich, William, Co., Inc. relief
monitoring	Radnofsky, Matthew I., development
Radiological monitoring instruments,	of inflatable components of
<i>see</i> Radiation detection instru-	personal equipment, etc
ments	Rado, Karolina, relief
Radiological protection and decon-	Radochonski, Danusia, relief
tamination of civil aircraft	Radomes, fabrication, etc., high tem-
Radiological Research Laboratory, Co-	perature ceramic structures
lumbia University, annual re-	Rafert, W. E., elements of armament
ports on research project	engineering, ballistics
Radiological warfare, removal of con-	Raft River, ground water in basin,
taminants from water, meth-	irrigation use
ods	Ragsdale, George C., windflow in 80-
Radiologists, medical personnel,	400 km altitude region of at-
USSR training	mosphere
Radiology:	Ragsdale, Robert G., single-cavity
equipment and materials, evaluat-	vortex gaseous nuclear rockets
ing	Rahmatullah, Mohammad, strato-
final off-site radiological safety re-	spheric circulation derived
port, Project Sedan	from meteorological rocket fir-
Moldavian SSR conference	ings, etc
monitors in community shelters,	Railroad accidents:
etc., handbook	accident bulletins
on-site radiological safety report,	all line-haul and switching and ter-
Project Sedan	minial companies, summary
operational radiological recovery	investigation reports
procedures at FAA facilities,	2450-51, 6635-37, 8435-36,
handbook	638,
research project, annual report	10357-361, 12266-268, 14079-80,
USSR, translations from Vestnik	17570, 19369-370.
rentzenologii i radiologii	rail-highway grade crossing acci-
<i>see also</i> Medical radiology	dents
Radioluminescence:	reported, preliminary summary,
use of luminescence in microbiolog-	monthly
ical tests, USSR study	summary and analysis, bulletin
yield of organic matters	Railroad Adjustment Board, <i>see</i> National Railroad Adjustment Board.
Radiolysis, <i>see</i> Radiochemistry	Railroad cars, equipment of class 1
Radiomen, <i>see</i> Radio operators	railroads
Radiometry:	<i>see also</i> Freight cars.
aerial survey, Project Sedan	Railroad crossings, accidents, 1962
scintillation method	Railroad district, Nev., geology of min-
Radiouclides:	ing area
and ionizing radiation in ornithol-	Railroad employees:
ogy, selected bibliography	nonoperating, wage chronology,
estuarine and other aquatic environ-	1920-62
ments, symposium	railway labor act, text
mathematical programming models	retirement act, amend—
for selection of diets to mini-	hearings
mize weighted intake	law
maximum permissible body burdens	reports
and concentration in air and	retirement tax act, amend—
water for occupational ex-	hearings
posure	law
transport by streama (series)	reports
uptake and transport by stream	temporary extended unemployment
sediments	insurance benefits act of 1961,
Radiophysics, news of higher educa-	amend—
tional institutions, USSR	hearings
10524, 12406, 19628	law
Radioprotective agents:	reports
correlative study of RNA content	unemployment insurance act,
and degree of radioresistance	amend—
of cells in vitro	hearings
depolymerized yeast ribonucleic	law
acid effects on radiated human	reports
cells in tissue culture	unemployment insurance act,
protective action of AET, etc., on	amend—
radiometric effect caused by	hearings
oleic acid oxidation products,	law
USSR study	reports
Radios, <i>see</i> Receivers (radio)	USSR, calendar-handbook, 1962-
Radiosondes, observations, manual	63
Radiostrontium, eliminating from or-	wage statistics, class 1
ganism, USSR study	work rules dispute, settlement—
10637	hearings
	law
	reports

# JANUARY-DECEMBER

	Entry
Railroad retirement acts, <i>see</i> Railroad employees.	
Railroad Retirement Board: appropriations, 1964—	
hearings .....	7981
law .....	20425
reports .....	18855
9874, 15356, .....	11919
budget, 1964, amendment .....	3923
monthly review .....	
report, 1962—	
departmental edition .....	9371
document edition .....	7852
2452 .....	
Railroad Safety Section, report, 1962 .....	
Railroad supplies, Federal item identification guides for supply cataloging, supplements .....	3652
Railroads:	
accounts, uniform system, Interpretations of .....	635
carload cost scales by territories, 1961 .....	8432
carload traffic, freight rates, indexes, 1953-61 .....	6634
carload waybill statistics, 1961 .....	6627, 8427
agricultural products .....	10348
all commodities .....	8426
animals and products .....	10350
forest products .....	
manufactures and miscellaneous and forwarder traffic .....	10349
mileage block distribution, traffic and revenue by commodity class .....	2446, 6628-29
mileage block progressions by commodity groups and classes .....	14075
mileage distribution by type of car .....	8425
mine products .....	6629, 8428
territorial distribution by type of car .....	8429
tons of revenue freight originated and terminated by States and commodity class .....	10351
weight distribution by type of car .....	6630
class 1—	
freight commodity statistics, quarterly .....	3739
freight train performance .....	3740
fuel and power statistics .....	3746
income and balance-sheet items .....	4182
line-haul, fluctuations in freight traffic compared with production, 1958-60 .....	6633
motive power and car equipment .....	3934
operating revenues and expenses .....	3992
passenger traffic statistics .....	4005
passenger train performance .....	4006
petroleum products, distribution .....	3607
revenue traffic statistics .....	4152
yard service performance .....	4317
Communist China—	
Chi-ehr RR .....	2661
information .....	8452
Pao ch'eng railroad construction .....	2740
featherbedding, work rules, etc., selected references .....	18014
freight service costs .....	20758
industry, employment and changing occupational patterns—	
departmental edition .....	9053
document edition .....	7836
industry, productivity and employment (address) .....	1184
Kazakhstan .....	6829
labor dispute, message from the President .....	13466
large—	
operating revenues and expenses .....	3993
operating statistics .....	3994
lessors and proprietary companies, transport statistics, 1961 .....	5107

	Entry
Railroads—Continued	
mileage block distribution, traffic and revenue by commodity class, etc. ....	6627
North Korean train and route schedules for 1963 .....	8678
officers, directors, etc., compensation .....	19365
private car lines, transport statistics, 1961 .....	2453
rights-of-way, pay value of improvements of lessees—	
Milford Dam construction, report .....	15288
Red Rock Reservoir construction—	
hearing .....	17332
report .....	15287
safety rules, transportation railway service, Army pamphlet .....	5915
transportation of mail, Post Office Department, railway post office requirements, contracting practices, etc., GAO review .....	19286
USSR—	
calendar-handbook for workers, 1962-63 .....	10630
Moscow-Caucasus guide .....	15847
Moscow-Chop railroad guide .....	12402
Moscow-Crimea railroad guide .....	10824
Moscow-Vladivostok railroad guide .....	12441
railroads and trains .....	12410
transport machine building, determination of unit cost of output .....	15840
work rules dispute, settlement—	
hearings .....	15381, 17175
law .....	17038
reports .....	17131-132, 17257
<i>see also</i> Electric railroads—Locomotives—Railroad employees—Railroads.	
Rails, Chinese railroads, low alloy rails with increased silicon content .....	14284
Rails (birds):	
hunting, possession, transportation, importation, Federal regulations, 1963-64 .....	15535, 17461
Railway cars, <i>see</i> Freight cars.	
Railway equipment, <i>see</i> Railroad supplies.	
Railway Express Agency, Inc., emergency board report .....	391
Railway labor act, <i>see</i> Railroad employees.	
Railways, <i>see</i> Electric railroads—Railroads.	
Rain:	
Alaska, rainfall-frequency probable maximum data for areas to 400 square miles, etc. ....	16692
autocorrelation of rainfall and streamflow minimums .....	6557
China's violent rainstorms, research on distribution .....	2610
effect of severe rainstorms on insloped and outloped logging roads .....	10231
Hawaiian Islands, frequency atlas, maximum recorded U.S. point rainfall, etc. ....	1593
recording gage, device for automatically starting when rainfall begins .....	14802
runoff from impervious surfaces, numerical computations .....	6510
<i>see also</i> Precipitation.	
Rain making, <i>see</i> Weather control.	
Rainbow Bridge National Monument, general information .....	16441
Rainfall, <i>see</i> Rain.	



# INDEX 1963

	Entry
Raisins, protecting against insects during drying and storage with malathion-treated trays.....	7575
Raleigh, Henry D., activation analysis, literature search.....	10856
Raleigh, Robert F., zooplankton, Bare Lake, Alaska, composition, abundance, etc., after fertilization.....	6465
Raleigh, N.C., Raleigh-Durham Airport, weather observations, hourly summary, decennial census.....	16658
RAM (radio attenuation measurement), see Radio communication.	
Ram-jet engines, see Engines (aircraft).	
Rama Road, construction, authorize funds for completion, etc., hearing.....	303
Ramaley, David, practical method for calibration of potentiometers.....	9214
Rambosek, Albert J., stresses in drill bit and rock under static loads.....	5495
Ramey, James T.: remarks— Nov. 27, 1962.....	143
Jan. 31, 1963.....	4499
Mar. 27, 1963.....	18604
Oct. 3, 1963.....	18602
Ramle, fiber, mechanical harvesting and ribboning.....	4373
Ramjet engines, see Engines (aircraft).	
Rampacek, Carl, sulfuric acid from sulfur dioxide by autoxidation in mechanical cells.....	12835
Rampart project, power market.....	2104
Ramsey, Leah W., engineering degrees (1961-62) and enrollments (fall 1962), advance report.....	6320
Ramseyer rule print of proposed Foreign Service buildings legislation.....	18939
Ranches: Colorado mountain-meadow cattle, for age programs and cattle systems.....	8147
equipment for beef cattle.....	1691
western, livestock, costs and returns, 1962.....	15412
Randall, C. C., mercury binary cycles for nuclear power plants.....	16860
Randall, John E., review of hawkfishes, family Cirrhitidae.....	12916
Randell, C. G., Equity Cooperative Livestock Sales Association.....	2238
Random processes, see Probabilities (mathematics).	
Range-energy relations for protons and electrons in Al, Si, and SiO <sub>2</sub> .....	12952
Range finders, SVV-1 light, field tests.....	5298
Range lands: beet leafhopper control in southern Idaho by seeding breeding areas to range grass.....	9540
classifying for conservation planning.....	21
cow and calf weight trends on mountain summer range.....	10222
managers, employment outlook.....	20934
New Mexico, crested wheatgrass for spring grazing.....	16758
publications, price list.....	18278
semiarid, field performance of large critical-depth flumes for measuring runoff.....	9541
south Florida range, effect of burning.....	10244
southern, management.....	20709
southwestern, mesquite control.....	18171

	Entry
Range lands—Continued vegetation characteristics, automatic data processing.....	6497
western, pellet seeding.....	11461
western range and livestock report, monthly.....	4303
western range and livestock, 17 western States, 1922-62.....	9590
Rankorder estimates of time required for crossstraining among 98 alrmen specialties.....	4401
Ransome, Robin K., YH-41 stability and control re-evaluation.....	20304
Rantz, S. E., tide-affected streams, discharge measurements, empirical method of determining.....	15617
Rapana, bezoar Inné, influence on Black Sea fauna, USSR study.....	20919
Raper, James L., rolling motions of delta configuration with wing-tip fins.....	20996
Raper, Luther E., stepping stones to good member relations.....	8205
Rapid City, S. Dak.: Municipal Airport, weather observations, hourly decennial census.....	21174
Negro alrmen, discrimination report before Civil Rights Commission.....	6022
Rapid determination of permeability in porous rock.....	1238
Rapid transit, see Local transit.	
Rapperport, E. J., high temperature properties of refractory alloys.....	18582
Rare earths: activation analysis, Communist Chinese study.....	10562
all-Union conference on chemistry, preparation, and analysis.....	774
Ames Laboratory research (remarks).....	9693
amine extraction systems, yttrium behavior and effect of sequestrants.....	12838
Colorado, New Mexico, and Wyoming, technological and economic problems of metal resources.....	3055
elements, differentiation in magmatic process.....	19942
metals— borides of.....	119
impurities, ion exchange separation and instrumental analysis.....	1237
minerals and metals, minerals yearbook chapter.....	18092
nitrates and oxides, acute mammalian toxicity.....	18502
separation by ion exchange with EDTA and DCTA, hydrogen as retaining ion.....	3089
separation of compounds by solvent extraction with amines, effect of chelating agents.....	7226
sulfides, crystal-chemical properties, USSR study.....	1061
Rare elements in coal.....	10940
Rare metals, see Metals.	
Rare phenomena vision in fingers of Rosa Kuleshova, USSR.....	14414
Raring, Richard H., progress report of NASA Special Committee on Materials Research for Supersonic Transports.....	12875
Rashbaum, William, use of social services by unmarried mothers.....	6011
Rashis, Bernard, ablation, analytical investigation.....	5564
Rasor, Annette M., relief.....	18820
Rasor, Robert W., relief.....	18820
Rasps, see Files and rasps.	
Ratay, Krysytyna, relief.....	6229

	Entry		Entry
Rates, <i>see</i> Air carriers—Carriers— Casualty insurance—Electricity— Fire insurance—Freight cars— Freight rates—Passenger rates— Telephone.		Rawin sets, <i>see</i> Radio direction find- ers.	
Rating scales: chance distribution of inconsistent response patterns in paired comparison and multiple rank- ing designs.....	7625	Rawles, Beverly A., guide to scientific and technical literature of Eastern Europe.....	5646
format variations, effects on judg- ment.....	7626	Ray, Ernest C., re-entrant cosmic-ray albedo.....	21020
Ratings: Navy training publications for ad- vancement, bibliography.....	11149	Ray acoustical model of ocean using depth-sound speed profile with continuous 1st derivative.....	11178
peer, Air Force officers, predictors of disciplinary problems.....	4462	Rayburn, Sam, Dam and Reservoir, <i>see</i> Sam Rayburn Dam and Reservoir.	
Rations, arctic survival rations.....	1761, 11499	Rayons (sub-areas) of Moscow.....	12764
<i>see also</i> Food for livestock.		Re, Richard J., aerodynamic effects of modifying wing inboard trail- ing-edge camber, etc.....	12879
Rather, John C., library research in progress.....	8175	REA, <i>see</i> Rural Electrification Ad- ministration.	
Rathjen, Warren F., trawling off New England coast, 1961, progress report on studies.....	8270	REA bulletin..... 5712, 9374, 14684, Reaction time, <i>see</i> Discrimination re- action.	21102
Rats: absorption of calcium, iron and vitamin B <sub>12</sub> during alterations in environmental temperature.....	18484	Reactions (chemical), <i>see</i> Chemical reactions.	
chronic exposure to hypoxia, effect on blood pressure and thyroid function of hypertensive rats.....	9629	Reactor fuel elements: diffusional bonding, fundamentals, 7th annual progress report....	129 9671
deep hypothermia, survival and tol- erance to circulatory arrest.....	13205	fabrication by swaging.....	
ecology and sociology of Norway rat.....	21032	fuel bearing fibers in aluminum- base fuel elements, fabrication properties, report.....	4492
exercising, effect of carbonic anhy- dase inhibition.....	14921	I & E, Dynapak extrusion.....	18565
exposed to cold, alterations in pro- tein metabolism.....	11501	irradiation behavior of BeO- <sup>235</sup> U fuel as function of fuel-particle size.....	14970
exposed to simulated altitude and high concentrations of nitro- gen, gaseous tissue nitrogen content.....	16790	metallic materials, comprehensive technical report.....	121
exposure, effects of cold acclimati- zation on liver di- and triphos- phopyridine nucleotide.....	11498	plutonium-uranium, separation and determination of plutonium by cation exchange.....	5939
fed pectin and saponin, effects on plasma and liver lipids, fecal acid bile and sterol excretion.....	11549 11499	powder packed uranium dioxide fuel elements, symposium.....	5925-26
fed pemmican, liver constituents.....		Reactor fuel rods: boiling water reactor, multi-rod burnout at high pressure.....	11555
healthy and irradiated, effect of so- dium gallate on nucleic acid content in organs, USSR study.....	12445	examination of 304 stainless steel cladding from cold-swaged and rolled fuel rods.....	7695
metabolic effects of methionine toxicity.....	18470	fabrication by low temperature sin- tered pellets, design.....	16847
performance, effects of aspartic acid.....	7686	failed hot gas isostatic pressed fuel rods, evaluation.....	16842
pulmonary effects of cold acclimati- zation and norepinephrine cal- origenesis.....	18474	powder fuel processing of 2-pass swaging.....	1830
red cell formation rate at 24°C and 5°C.....	13203	UO <sub>2</sub> swaged powder, failures at high thermal performance con- ditions.....	16840
swimming performance, effects of octacosanol, wheat germ oil and vitamin E.....	7687	vibration in parallel flow.....	9676
tissue cytochrome c levels, altera- tions by chronic cold exposure.....	18480	Reactor fuels: AEC cycle program, design and fab- rication of basic fuel assem- blies.....	16835
warm- and cold-acclimatized, car- diovascular effects of norepi- nephrine, thermogenesis.....	13206	burnup determination.....	7714
Ravenna, Ohio: railroad accident.....	640	ceramic, irradiation testing, sum- mary report.....	18566
redevelopment area, statistical pro- file.....	7811	ceramic matrix fuels containing coated particles, symposium proceedings.....	15008
Ravner, H., antioxidant action of metals and organometal com- pounds.....	7370	cladding— materials, superheat fuel clad- ding.....	5932 5933
Raw materials: African, strategic significance in U.S. planning.....	1776	stainless steel tubing evaluation, conventional and nuclear fuels, competitors or partners? (re- marks).....	11587
supplies, contribution of imports to U.S., 1961.....	5086	cycle program, boiling water re- actor research and development program, 11th quarterly re- port.....	16845
		EVESR nuclear superheat fuel de- velopment project, reports.....	7698, 16841
		failure of, literature search.....	5943
		fast reactors, transient effects.....	14982

# INDEX 1963

Entry	Entry
Reactor fuels—Continued	Reactors (atomic)—Continued
nuclear fuels and materials development.....	deposition of matter from flowing stream.....
7711	application to radioactive superheated stream system.....
plutonium-uranium carbide and plutonium-uranium oxide, comparative study.....	18569
1829	general relations and equations.....
preparation of (Th,U)C <sub>2</sub> fuel particles for HTGR.....	18568
14961	earthquakes, effects on nuclear reactors, design, etc.....
pressurized water reactors fuel cycle costs, effects of changing economic conditions.....	20330
14990	Elk River, Minn., nuclear-reactor site, geology, etc.....
PuC-UC and PuO <sub>2</sub> -UO <sub>2</sub> as fast reactor fuel, comparative study, economic considerations.....	14016
14975	employing high pressure boiling water as working fluid, critical heat flux and flow pattern characteristics.....
PuO <sub>2</sub> -UO <sub>2</sub> fast reactor fuel post-irradiation examination.....	122
123	EVER nuclear superheat fuel development project, reports.....
processing, review of recent developments.....	7698, 9678, 16841
4133	fast—
reprocessing plant for fast ceramic reactors.....	ceramic fuel reprocessing plant, fuel cycle costs and temperature coefficients of reactivity for PuO <sub>2</sub> -SS and PuO <sub>2</sub> -UO <sub>2</sub> .....
11556	18564
thorium fuel cycle symposium, proceedings, Dec. 5-7, 1962.....	fast breeder, state of development, East Germany study.....
15007	6945
transient effects in fast reactor fuels.....	fast flux liquid metal loop in advanced test reactor, design criteria.....
9675	16848
UO <sub>2</sub> powder, compacted with deformed stainless steel cladding, erosion flow testing.....	Federal item identification guides for supply cataloging, supplements.....
16836	3655
uranium carbide development.....	fluidized-bed, design and construction.....
15017	9134
Reactor power plants, see Nuclear reactor power plants.	gas-cooled—
Reactor safety, see Safety of life.	experimental, final hazards, summary reports.....
Reactors:	128, 16852
large-diameter, use in synthesizing pipeline gas and gasoline by hot-gas-recycle process.....	high temperature 40-MW(E) prototype, research and development program, progress reports.....
3084	11554, 14965
microcatalytic, testing oxidation catalysts.....	maritime program, progress report.....
3051	18567
see also Fluidized bed reactors.	gaseous-core cylindrical-cavity system with 2-dimensional criticality calculations.....
Reactors (atomic):	7260
absorber burn-up experiment.....	Georgia nuclear laboratory area, aeroradioactivity survey and areal geology.....
9673	11552
advanced test, fast flux liquid metal loop, design criteria.....	Hanford new production reactor, proposed arrangements for electric generating facilities, hearing.....
18574	1969
AEC development program (remarks).....	heavy water lattice project, annual report.....
18604	7702
AEC-naval reactor program report, hearing.....	heavy-water, use for experimental work in nuclear and reactor physics, USSR study.....
268	19651
Ames Laboratory Research Reactor dedication (remarks).....	hot channel factors and burnout, literature search.....
9693	5944
application of low-permeability graphite properties, techniques and procedures.....	HTGR (Peach Bottom), activation measurements of Th-232 resonance captures.....
14966	7689
Army nuclear power program, code development program, water-moderated arrays of uranium and stainless steel.....	HTGR, preparation of (Th,U)C <sub>2</sub> fuel.....
126	14961
beryllium oxide, experimental, progress report.....	in-core instrumentation, telemetering.....
14962	4478
boiling water—	in-core power monitoring of nuclear reactors.....
fuel cycle program, 11th quarterly report.....	7692
16845	large fast ceramic, Doppler calculations.....
multi-rod burnout at high pressure.....	14981
11555	light water-moderated fog-cooled, conceptual design evaluation.....
research and development program.....	4497
16845	M.I.T. in-pile loop, irradiation of Santowax OMP—
zirconium 1.5 w/o niobium cladding, evaluation.....	equipment design, etc.....
9677	4483
boiling water-separate superheat reactor plant, 600 MWe, design study.....	summary.....
7696	4482
built, being built, or planned, U.S.....	marking system for valves, fittings, flanges, unions used in nuclear reactor systems, Federal standard.....
5947, 18593	2281
cavity, graphite-lined surface, spatial distribution of neutron flux.....	materials—
5910	corrosion, articles.....
chemistry, 3d conference.....	1818
15006	mechanical properties.....
civilian nuclear power program, economic benefits from continuing, evaluation.....	14967
15000	review of recent developments.....
components, radiation damage.....	4134
11172	
coolant, study of wet steam, final report.....	
1833	
coolants, wet steam under fog flow conditions, investigation.....	
4497	

	Entry
Reactors (atomic)—Continued	
materials of construction of 21 ves-	
sels, neutron irradiation ef-	
fect of brittle-rupture prop-	
erties	9690
multi-group diffusion methods for	
analysis	1835
nonuniform burnup and poisoning	
effects in reactor and validity	
of uniform approximation	7229
nuclear steam generator for mer-	
chant ship application	5923
nuclear superheat project, quar-	
terly reports	16837-838
Oak Ridge National Laboratory	
area, Tenn. and Ky., aeroradio-	
activity survey and areal ge-	
ology	1827
organic coolant technology, prog-	
ress report	11559
organic coolants essential data, 4th	
quarterly report, Jan. 1-Mar.	
30, 1962	5934
organic coolants, irradiation loop	
studies, progress report	14991
parameters, measurements in sub-	
critical and critical assem-	
blies	11562
physics constants	16833
Plum Brook—	
containment vessel, leak-rate	
testing	14551
hydraulic characteristics, meas-	
uring techniques	16367
low-power tests	7258
PM-1 program—	
final progress report	18578
plant performance studies, final	
periodic report	18579
policy objectives and Government	
organization (remarks)	1847
power—	
conversion unit study	14977
cost evaluation guide, supp.	15004
demonstration program, selected	
reactors, literature search	15003
high density development project,	
300MWe HPD conceptual de-	
sign study, interim reports	1828,
	7694
licensing, regulations, safeguards,	
etc	16862
pulsed neutron application to	
start-up, precedures, develop-	
ment	1831, 9679, 14980
power reactor technology, review	
of recent developments	4030
pressurized water reactors fuel	
cycle costs, effects of changing	
economic conditions	14990
pressurized water, thermal calcula-	
tion, USSR study	14299
probability theory and core design	14974
research in Latvian SSR	808
rockets, use of advanced nuclear	
materials	4491
safety—	
lessons from civilian and military	
experience for aerospace (re-	
marks)	18602
literature search	131, 18587
simulators, development of equip-	
ment and instruction manual	15014
single-cavity vortex gaseous nu-	
clear rockets, performance ca-	
pability	11023
site criteria, progress report (re-	
marks)	18605
SL-1 accident recovery operation,	
final report	5935
sodium-cooled, fast ceramic reac-	
tor development program—	
reports	7697, 16839, 16844

	Entry
Reactors (atomic)—Continued	
sodium-cooled, fast ceramic re-	
actor development program—	
Continued	
summary report, July 1959-Sept.	
1961	7691
sodium-heated steam generator ex-	
periment	15012
Soviet use of balloons in materials	
testing	16054
superheat meeting	9688
telemetering transmittals for in-	
core power monitoring, in-core	
instrumentation development	
program, quarterly progress	
report	18573
thermal flux liquid metal package	
loop design criteria, summary	
report	18575
Tory II-A, nuclear ramjet test re-	
actor	4495
U-233 fuel refabrication plant, con-	
ceptual design	7703
VBWR irradiation of reactor con-	
trol materials in tubes con-	
taining simulated defects	7693
water cooled thermionic nuclear	
power plant feasibility study	11563
wet steam, etc., as coolant	5949
Reader, Paul D., electron-bombard-	
ment ion rocket operated with	
alternating-current supplies	1286
Readers for blind, see Blind.	
Reading:	
devices, Russian language book,	
translation	8478
difficulty, short-term treatment	16788
for profit, Braille books, etc., an-	
notated list	9091
phonics in beginning reading	12071
primary level, research, bibliogra-	
phy	19116
professional guide for Navy and	
Marine Corps officers	3211
teaching, checklist of practices	364
Ready Reserve, see Reserve compo-	
nents of Armed Forces.	
Real estate:	
conveyance to Waukegan Port Dis-	
trict, Ill., report	18907
Defense Department projects, hear-	
ings	6185, 7986
District of Columbia horizontal	
property act, report	9901
Federal surplus, acquisition for	
health and educational pur-	
poses	6570
industry, employer expenditures for	
supplementary remuneration	
practices, 1961	18044
leased to U.S. throughout world,	
1962	8328
living units, minimum property re-	
quirements Honolulu insuring	
office district	12111
owned by U.S. throughout world,	
1962	6543
Post Office Department's program	
relating to leasing of major fa-	
cilities under long term leases	2331
see also Farms—Mortgages.	
Real-gas effects on hypersonic nozzle	
contours with method of cal-	
culation	9160
Real-gas hypersonic-nozzle flow pa-	
rameters for nitrogen in ther-	
modynamic equilibrium	20997
Real property, see Real estate.	
Realm of flight, presenting practical	
information about weather in	
relation to piloting of private	
aircraft	17426
Reanimatology, problems in traumatic	
clinic, USSR study	19517

# INDEX 1963

Entry	Entry	Entry
Reasoning:		Reclamation of land—Continued
judgment analysis, technique for		strip-mine reclamation—
analyzing group judgment.....	9622	alder, use as nurse crop in planta-
political and economic dialectics,		tions ..... 20696
Communist China.....	7131	bibliography ..... 566
USSR chemistry courses for develop-		water supply contracts, renewal—
ing in students dialectic-ma-		law ..... 13418
terialistic world outlook.....	17580	reports ..... 6164, 11984
Receipts and classes of post offices.....	1388	Reclamation projects, <i>see</i> Reclamation
Receipts and expenditures, <i>see</i> Finance.		of land—also names of projects.
Receivers (radio):		Recombination reactions, volume re-
airborne glide slope receiving equip-		combination of cesium ions.....
ment, technical standard order	8221	7482
airborne radio marker receiving		Reconnaissance (aerial):
equipment, technical standard		aeromagnetic, of Cook Inlet, Alas-
order ..... 13903		ka ..... 6553
home type and automobile, current		Reconnaissance (geologic):
industrial reports..... 16896,	20351	Alaska—
home-type, Federal item identifica-		beach sands, Bristol Bay..... 10949
tion guides for supply catalog-		northern Baranof Island..... 10284
ing, supplements..... 3659		Yukon Flats district..... 2339
sensitivity in presence of 2 signals		ground-water resources in Mississip-
with coincident frequency spec-		plan Plateau region, Ky..... 12233
tra, USSR study..... 10503		hydrogeologic, San Antonio Island,
transistor, Tariff Commission re-		Calif ..... 6562
port ..... 11346		hydrology of Little Lost River
Receptors, mediatory function of		Basin, Idaho..... 10297
acetylcholine and nature of		iron resources of New Mexico..... 20948
cholinergic receptors..... 2969		southern Peru..... 9685
Recessions, <i>see</i> Business recession.		uranium, Peru—
Recipes:		coast from Lima to Talara..... 14997
community feeding programs, man-		Cuzco-Anta area..... 11581
ual for leaders..... 5093		Iquitos area..... 14999
eggs, dried..... 7580		Reconstruction Finance Corporation,
Navy-Marine Corps recipe service.....	1566	liquidating agencies, file annual
Reciprocal trade agreements, <i>see</i> Com-		reports under RFC act, re-
mercial treaties.		port ..... 20602
Reciprocity in quantum mechanics.....	18160	Recontracting of conservation re-
Recirculation principle for ground ef-		serve contracts expiring in
fect machines..... 7484, 11350,	18352	1963 and 1964..... 17156
Reclamation Bureau:		Record players, <i>see</i> Phonographs.
annual report, 1962..... 9372		Recording instruments:
appropriations, 1964, hearings.....	17162	thermistor bridge for use with null
financial condition and operations,		balance recorders..... 6516
fiscal year 1962, summary re-		unmanned system for data on
port ..... 7418		stresses and accelerations on
investigations, costs, nonreimburs-		ships at sea..... 16556
able—		<i>see also</i> names or types of instru-
hearing ..... 15389		ments.
report ..... 17258		Records:
library accessions, list..... 16550		damaged by fire and water, salvag-
operation and maintenance equip-		ing and restoring..... 10272
ment and procedures release.....	3995	employers, kept under fair labor
press releases..... 4090		standards act—
publications available for sale,		general requirements..... 5767
list ..... 4119, 5708		miscellaneous exemptions, etc.,
purpose, background, accomplish-		Government departments, etc., dis-
ments, etc..... 1439		position, reports..... 7920-22,
report 1962, statistical appendix.....	16549	7969, 9881, 11793, 11852, 13591,
<i>see</i> the West reclaimed, films avail-		15251, 17102, 17140, 18845,
able for educational pur-		18884.
poses ..... 18298		groups in National Archives and
Reclamation era..... 4135		Federal records centers, list..... 19948
Reclamation of land:		keeping, curriculum for manpower
amend small projects act of 1956—		development and training pro-
hearing ..... 15389		gram ..... 2161
report ..... 17280		livestock dealers, recordkeeping un-
Communist China, Manass River		der packers and stockyards
reclamation district, transla-	2843	act ..... 16754
Grand Valley Water Users' Associa-		papers in Federal Records Center,
tion ..... 2843		Seattle, Wash., preliminary in-
reclamation, repayment contract,		ventory, Sir Henry S. Well-
modify—		come ..... 7305
law ..... 13417		President's Committee on Equal
report ..... 6153		Employment Opportunity rec-
lower Colorado River project, gen-		ordkeeping practices, manual..... 18271
eral information..... 14682		separation, storage, disposal, Na-
Nevada, repeal Pittman act author-		tional Archives and Records
izing grants, report..... 6170		Service, GAO review..... 14006
questions and answers..... 16545		transferred, certification of facts by
reclamation's role in recreation.....	9373	GSA administrator, report..... 18890
		<i>see also</i> Medical records—Military
		records—also names of depart-
		ments, etc.—also subjects.



	Entry
Recovery of tin, tungsten, and other metals from tin smelter wastes	1245
Recreation:	
and other selected land use activities, Forest Service, GAO review	8320
Appalachian Mountain areas, ex-urban development	12049
community, PACAF basic bibliographies	18491
community recreation and public domain	17547
development, 3 California national forests, possible impact on timber production	6501
enterprises, loans to family farmers	471
equipment, Federal item identification guides for supply cataloging, supplements	3659
farmers' income-producing facilities, liability and insurance protection	15418
hospital specialist, examination announcement, discontinuance notice	18728
impact on southern Appalachian campgrounds and picnic sites	6525
intermountain region, national forests	582
land and water conservation fund, establish, hearings	8117, 13655, 15338
land conservation fund, establish, hearings	292
national organizations directory	18221
outdoor—	
beneficial effects, planning adequately for needs and facilities (remarks)	20751
coordination, planning, and planning grants, hearings	293
domestic, foreign travels effect on	1380
Federal and State agencies, directory	9319
Federal assistance in planning, goal of Outdoor Recreation Bureau (remarks)	1379
Federal legislative proposals and plans (remarks)	5665
growing role as important and primary use of land resources (remarks)	21065
information and outdoor recreation research	15573
legislative needs (remarks)	3247
metropolitan regions of U.S., needs, resources, etc.	3248-49, 7382
Ohio, private enterprises, directory	15556
opportunity for redevelopment	12244
private facilities	16473
promote Federal and State programs—	
hearing	6301
law	11721
reports	6232, 7925, 7946, 9916
public demands (remarks)	1378
research programs, current and projected (address)	14846
State-Federal program, needs and opportunities (remarks)	12967
survey in Denmark, France, Great Britain, West Germany, Netherlands and Japan	1380
timber industry's role in development of facilities (remarks)	7380
planning to conserve natural resources (address)	14052
professional education to meet sociological needs (remarks)	7381

	Entry
Recreation—Continued	
projections to 1976 and 2000, economic growth, population, labor force and leisure and transportation	3250
reclamation lakes, region 4, general information	1440
reclamation projects	9373
recreation and public purposes act of 1926 and related laws	17547
research and management for recreation, work of Fish and Wildlife Service	4950
resource specialists, Outdoor Recreation Bureau, etc., examination announcement	13331
resources development (address)—	20274
rural—	
as a business, bibliography	6402
enterprises for profit	18419
new opportunities on private land, facilities, etc.	11463
specialist—	
employment with Air Force	16777
examination announcement	4613
discontinuance notice	13326
visits and use estimates, instructions for using traffic counters	12193
water resource development projects, planning policy, hearings	13653
Recreation areas and demonstration projects:	
Bureau of Reclamation	9373
California, judging hazard from native trees, guide for professional foresters	15583
low-income housing demonstration program, guide	12240
outdoor recreation needs and challenge, National Conference on Outdoor Recreation Research at Ann Arbor, Mich. (address)	10310
Recreational boating guide, changes	11677
Recruiting, see Civil service.	
Recruiting and enlistment:	
Air Force nurse, walk proudly into future	88
Army recruiting & career counseling journal	4136
reenlistment of undesirable military personnel, GAO review	5006
reserve personnel, special program, amend act—	
hearings	13639, 15376
law	17040
reports	13543, 15360
strategy with fluctuating availability and known demand, evaluation	4406
telling the Marine Corps story, recruiters manual	18058
WAC officers, selected for success, career information	111
Rectifiers, use in refining silicon tetrachloride and trichlorosilane, USSR study	17886
Recursion relation associated with certain special type determinant	9144
Red, red-green, relative sensitivity as function of retinal position	9102
Red alder, see Alder.	
Red China, see China.	
Red Cross, achievements in educational health work, etc.	7061
see also International Red Cross.	
Red Dane cattle, see Cattle.	
Red Devil Quicksilver Mine, Alaska, geology	15604

# INDEX 1963

Entry	Entry
Red flag (Chinese periodical):	
translations-----	704
1113, 1144, 2793, 2962, 5407,	
8564, 8702, 10549, 10725, 12407,	
12536, 14238, 17950, 19676,	
20851, 20853.	
Red iron ores, see Hematite.	
Red oak, see Oak.	
Red pine, see Pine.	
Red Poll cattle, see Cattle.	
Red River:	
engineer report—	
departmental edition-----	2216
document edition-----	1979
Red River Parish, La., water re-	
sources-----	5036
Red Rock Dam:	
designate—	
law-----	17047
reports-----	15259, 17252
Red Rock Lake:	
designate—	
law-----	17047
reports-----	15259, 17252
Red Rock Lakes National Wildlife	
Refuge, birds-----	15533
Red Rock Reservoir:	
railroad rights-of-way, pay value of	
improvements of lessees—	
hearing-----	17332
report-----	15287
Red Sea:	
lights and fog signals, list-----	9259, 19989
maintenance of lights, international	
agreement-----	11924
sailing directions-----	3204
Redden, J. E., Twl basic course-----	7457
Redden, Jack A.:	
diamond-drilling exploration of	
Beecher no. 3-Black Diamond	
pegmatite, Custer County, S.	
Dak-----	14019
geology and pegmatites of Fourmile	
quadrangle, Black Hills, S.	
Dak-----	14020
Redevelopment (city planning, etc.):	
accelerated public works program,	
maximum grants-in-aid, supp.	
administration, Fort Worth regional	
office, HHFA, GAO review-----	2333
AID missions, bibliography-----	15626
area designation status reports-----	7655, 11523, 16816
area redevelopment—	
approach to creating jobs (re-	
marks)-----	18531
bookshelf of community aids-----	14932-933
local economic programs, case	
studies in 8 northeastern com-	
munities-----	16817
manpower reports—	
Ashland, Ky-----	17399
Detroit, Mich-----	17398
Huntington, W. Va-----	17399
New Bedford, Mass-----	17400
Pawtucket, R.I-----	17402
Pittsburgh, Pa-----	17401
Providence, R.I-----	17402
maximum grants-in-aid for eli-	
gible areas under accelerated	
public works program-----	16815
technical assistance-----	11524
technical leaflets-----	12243-244
area redevelopment act, 1963 amend-	
ments—	
hearings-----	9925, 10000, 17164
report-----	9889, 11800, 11193, 15271
areas—	
maps-----	1787, 16818
summary lists-----	7655, 11523, 16816
attracting new industry-----	7656
community planning, 60 books, list-----	14040
community renewal program guide,	
CRP (series)-----	14764
Redevelopment (city planning, etc.)—	
Continued	
Connecticut, 4-town area-----	20317
demolition and clearance practice-----	1579
depressed areas, Federal Govern-	
ment's attack on problems (re-	
marks)-----	1786
developing home grown industry-----	5904
District of Columbia, include non-	
residential areas, report-----	13729
Evansville story, example of what	
ARA program is designed to do	
(address)-----	13338
Federal aids to communities, hand-	
book-----	14932
FHA mortgage insurance program	
for urban renewal housing,	
need to revise procedures in	
administration, GAO report-----	20718
grant applications, local review,	
hearings-----	17313
Guam, public authority to under-	
take urban renewal, reports-----	13567, 20583
helping people to help themselves in	
country and in towns, overall	
economic development pro-	
gram-----	4352
historic preservation through urban	
renewal-----	9473
listing of land in urban renewal	
project areas available for pri-	
ivate redevelopment-----	3390-91, 14765, 16639
local area groups, their role, prob-	
lems, etc. (remarks)-----	11526
local public agency letters-----	3877
outdoor recreation, field of opportu-	
nity-----	12244
Paterson, N.J., ARA-MDTA pro-	
gram, graduation of 500th	
trainee (remarks)-----	18532
public facility loans and grants,	
Federal laws-----	6573
relocation of elderly people, hear-	
ings-----	6287, 8090
rural fringe and urban expansion,	
Prince Georges and Mont-	
gomery Counties, Md., case	
study-----	19089
Small Business Administration's	
role in area redevelopment-----	9381
social problems of American com-	
munity (remarks)-----	21151
special area development services	
available, rural areas develop-	
ment handbook-----	11449
statistical profile-----	
Ashtabula-Conneaut, Ohio, area-----	4655
Carolina, P.R-----	15135
Kent, Ohio-----	7811
Manati, P.R., area-----	13379
Mattoon, Ill-----	7812
Newark, N.Y-----	15136
Ravenna, Ohio-----	7811
Yauco, P.R., area-----	13378
urban economic development, guide-	
lines (address)-----	10306
urban expansion, problems and	
needs, conference papers-----	14042
urban planning assistance pro-	
gram—	
project directories-----	11371, 13108, 18359
report-----	4141
urban renewal—	
District of Columbia—	
hearings-----	11890
report-----	2037
Federal assistance to commu-	
nities, etc., fact sheet-----	3393
FHA mortgage insurance, fact	
sheet-----	10153
manual-----	4270
notes-----	4271

Entry	Entry
Redevelopment (city planning, etc.)—Continued	Reference handbook for VOR and VOT equipment modifications and instructions..... 10111
urban renewal—Continued	Refineries, <i>see</i> Petroleum refineries.
operations under title 1, Housing act of 1949, report..... 4142	Refining, <i>see</i> Smelting—Zone refining.
problems and promise (remarks)..... 5764	Reflection:
project characteristics, 1962..... 1580, 16640, 16640	and information concepts in cybernetics, USSR study..... 10777
project directory..... 4272	reflection and transmission of electrons by aluminum foil..... 9217
questions and answers..... 11369	telemetering signals by ionized flow fields surrounding reentry bodies..... 16378
rehabilitation, minimum property standards..... 13913	Reflection (light):
using computer graphics in community renewal, manual for professionals in urban analysis and related fields..... 14764	spacecraft coatings, integrating sphere for monitoring..... 9178
<i>see also</i> Rural redevelopment.	Reflections on Soviet scientific progress..... 17629
Redmond, John, Dam and Reservoir, <i>see</i> John Redmond Dam and Reservoir.	Reflectivity:
Redstrom, Ruth A., consumer practices in handling and storing frozen foods, etc..... 16742	radiant energy, angular distribution from gray asymmetric grooves..... 20992
Reducing costs of grading wool in warehouses..... 1707	reduction from transparent materials, techniques applicable to plastic helicopter canopies, evaluation..... 2118
Reduction of Nonessential Federal Expenditures Joint Committee, committee prints..... 3414-15	Reflexes:
Reduction temperature of metals and heat-resistance of alloys, USSR..... 10432	motor defensive conditioned, automatic programming device for investigating, USSR study..... 2801
Redys, John J., detection of group A streptococci in throat cultures by immunofluorescence..... 12987	postural in intact animals under conditions of weightlessness..... 7297
Reed, Avery H., Jr., mineral industry of Alabama..... 1210, 20952	Reforestation, <i>see</i> Forest planting.
Reed, Edith Meadows, <i>see</i> Meadows-Reed, Edith.	Reformatories, changing programs, problems..... 1928
Reed, Elizabeth, plans for visiting professional..... 13022	Refraction:
Reed, I. F., disk plows..... 16736	by terrestrial atmospheres, airborne radar observations, charts of corrections..... 7596
Reed, James A., remarks, May 22, 1963..... 11361	effect on setting sun, seen from space..... 12862
Reed, J. H., methods of generating functions with Bendix DA-1 digital differential analyzer..... 3233	Refractive index, invert sugar, aqueous solutions..... 12897
Reed, John C., Jr., crystalline rocks of Potomac River gorge near Washington, D.C..... 19317	Refractories, <i>see</i> Refractory materials.
Reed, L. B., insects and diseases of vegetables in home garden..... 11452	Refractory alloy foil rolling development program..... 7627
Reed, Louis S., enrollment of Blue Cross and Blue Shield plans, 1962..... 16563	Refractory materials:
Independent health insurance plans, 1962..... 14698	compatibility of molten uranium dioxide..... 5572
Reed, Robert D., skin, etc., temperatures on X-15 during flight..... 18133	high temperature—
Reed, Wilmer H., 3d, dynamic response of rising and falling balloon wind sensors with application to wind load estimates..... 20981	alloys, properties..... 18582
Reemployment rights, <i>see</i> Government officials and employees.	ceramic structures..... 9279
Reenlistment, <i>see</i> Recruiting and enlistment.	made of sintered aluminum powder, USSR study..... 6891
Re-entrant cosmic-ray albedo..... 21020	machining..... 56
Reentry into atmosphere, <i>see</i> Atmospheric entry.	metals, tensile properties and sheet-bending fatigue properties at room temperature..... 3153
Reentry vehicle, <i>see</i> Spacecraft.	refractories—
Reeves, Leo E., homestead entries, validate..... 8043, 9845, 13391	based on boron nitride, USSR study..... 697
Referativnyy zhurnal-metallurgiya (periodical):..... 8541	current industrial reports..... 3575, 7759
abstracts..... 8541	technology..... 18520
Reference books:	USSR, articles..... 2620
NBS, national standard reference data program, background information..... 14604	<i>see also</i> names of materials.
PACAF basic bibliography..... 9621	Refractory metals, <i>see</i> Metals.
Reference guide series, National Institutes of Health..... 12907	Refrigerants, choking 2-phase flow literature summary and idealized design solutions..... 18191
	Refrigerated storage warehouses, <i>see</i> Warehouses.
	Refrigeration and refrigerating machinery:
	equipment—
	current industrial reports, 1962..... 20350
	Federal item identification guides for supply cataloging, supplements..... 3655
	industry, outlook for 1963 and review of 1962..... 4524
	refrigeration emergency construction, engineering manual..... 12091

# INDEX 1963

Entry	Entry
Refrigeration and refrigerating machinery—Continued	
refrigerator entrapment prevention, safety guide.....	6441
USSR—	
fishing industry, use of rapid-freezing methods.....	17755
industrial development, translations.....	694,
892, 2633, 8968, 14888,	15704
standardization of home refrigerators.....	10561
Refrigerators, household, industry outlook for 1963 and review of 1962.....	1860
Refugees:	
Arab, from Palestine, report.....	7957
Cuban—	
children, care away from home, observations of reporter.....	6013
problems, hearings.....	4786, 19063
U.S. policy concerning.....	16820
problems, investigation, authorization, reports.....	6260, 11983
Refuges, see Wildlife refuges—also names of refuges.	
Refunds of taxes, see Tax refunds.	
Refuse:	
collection and disposal, bibliography.....	18292
disposal problem, construction, etc., of sanitary landfill.....	14660
garbage and rubbish disposal, emergency construction, engineering and design manual.....	13879
national status on control of garbage-feeding.....	3939
nursing homes, waste handling.....	13009
safe and sanitary home storage.....	7412
Regalia, see Insignia.	
Regeneration (biology):	
white ash, seedbed, overstory, and understory, effects.....	10239
Regional cooperatives handling under \$10 million of supplies, 1960-61.....	15463
Registered nurses, see Nurses and nursing.	
Registers:	
Air Force—	
departmental edition.....	4388-89
document edition.....	4712-13
Army—	
departmental edition.....	7682, 9664-65
document edition.....	7851, 9831-32
Army National Guard, 1963.....	14605
civil aircraft, United States.....	17466
Coast Guard.....	18744
Coast Guard Reserve.....	7801
Federal register.....	3668
codification guide.....	3669
indexes.....	3670
Federal register act, amend, reports.....	6152, 9965
foreign aid, voluntary agencies.....	14073
Hill-Burton projects.....	3768
Military Academy, West Point.....	10935
National Driver Register Service.....	20118
Naval Academy, Annapolis, 1962-63.....	3200
Navy and Marine Corps, officers—	
departmental edition.....	12944
document edition.....	11748
scientific and technical personnel—	
metropolitan area distribution of scientists.....	3195
national.....	3191
salaries and characteristics of scientists, 1962.....	3196
Registration, see subjects.	
Regression (statistics):	
applied multiple linear regression.....	13213
Regular Army, see Army.	
Regulations, see Code of Federal regulations—also names of departments, etc., issuing regulations—also subjects.	
Regulatory announcements, Fish and Wildlife Service.....	15535, 17461
Rehabilitation:	
facilities on college campuses, 1959-61.....	17382
Guam, reports.....	17112, 20582
urban renewal areas, minimum property standards.....	13913
see also subjects.	
Rehabilitation in drug addiction, report on 5-year community experiment of New York Demonstration Center.....	19966
Rehabilitation of the disabled:	
areawide planning of facilities, report of joint committee.....	12982
children and teen-agers, special services.....	13111
medical, of injured workers.....	3019
medical consultants in State program, handbook.....	9482
mentally ill gain brighter prospects (remarks).....	9042
mentally ill, 1960's, decade of advance.....	1585
milieu rehabilitation for physical and mental handicaps.....	14768
multiple disability facilities planning, compilation of studies.....	5691
nurse's role.....	1587
platform for action, report of National Institute on Rehabilitation and Workmen's compensation.....	20224
prosthetics, progress.....	1588
rehabilitation record.....	4137
rehabilitation service series.....	9483,
11377,	16644
rehabilitation-special education cooperation on prevocational programs for handicapped young adults, conference proceedings.....	20225
research and demonstration projects, bibliography.....	1589
step into action, guidebook for above-knee amputee.....	9356
veterans, vocational rehabilitation & education, quarterly information bulletin.....	9477
vocational—	
in suburban community hospital, medical service, counsel and guidance, etc.....	9484
older handicapped workers.....	13112
research and demonstration projects approved.....	11377
role of small business enterprises.....	16644
State agencies, factors influencing effectiveness.....	11376
State salary ranges.....	616, 10305, 19340
Vocational Rehabilitation Administration, advisory groups, 1963.....	14767
VR-ISC series.....	9484
Reid, J. David, making household fabrics flame resistant.....	5825
Reid, Richard, trajectory analysis of variable-drag payload ejected from vehicle in low earth orbit.....	16402
Reid, W. J., Jr., cabbage insects, how to control them in home garden.....	7566
Rein, J. E., burnup determination of nuclear fuels.....	7714
Reindeer, thermal and metabolic measurements during rest and exercise.....	1751

Entry	Entry
Reinforced plastics, <i>see</i> Plastics.	Renegotiation, <i>see</i> Government con-
Reingold, Nathan, materials research	tracts.
chronology, 1917-57-----	61 Renegotiation act of 1951, <i>see</i> Gov-
Reinhart, K. G., effect on streamflow	ernment contracts.
of four forest practices in	Renegotiation Board:
mountains of West Va-----	annual report, 1962-----
10238	3309
Reinhardt, Walter A., unsteady diffu-	appropriations, 1964, hearings-----
sion with recombination in tern-	18919
ary mixture of diatomic mole-	regulations, compilation-----
cules, etc-----	3310
7278	renegotiation act of 1951, as
Reisig, G. H. R., atmospheric ballis-	amended-----
tics in rocket technology-----	3308
14567	renegotiation, what it is, how it
Relative cost of shipbuilding in vari-	works-----
ous coastal districts of United	3312
States, report to Congress-----	5710, 20121
16314	rulings and bulletins, index-----
Relay, <i>see</i> Satellites.	20121
Relays, <i>see</i> Electric relays.	3311
Releases, <i>see</i> name of office issuing	Renne, Roland R.:
releases.	addresses-----
Reliability (mechanical):	Mar. 15, 1963-----
aircraft weapons system, AFFTC	9557
category II/III test concepts-----	Mar. 29, 1963-----
16774	9566
bibliography-----	Renner, F. G., classifying rangelands
18626	for conservation planning-----
engineering and testing, Naval	21
Weapons Bureau data-----	Renner, James A., sea surface tem-
9280	perature monthly average and
literature survey at Air Force	anomaly charts, Eastern tropi-
Flight Test Center-----	cal Pacific Ocean, 1947-58-----
7609	10202
missile and space systems, military-	Rennie, D. W., physical insulation of
industry symposium, papers-----	Korean diving women-----
8141	1759
model and analysis for Project	Reno, Horace T., molybdenum-----
Mercury 3-orbit manned and	18084
unmanned mission-----	Reno, Nev., Municipal Airport,
1313	weather observations, hourly,
space system contractors, NASA	decennial census-----
program provisions for-----	9499
18129	Renovizing:
stress and failure rate data for	industrial, New York State regional
electronic equipment-----	conference, report-----
345	18630
system reliability allocation and	Veterans' Administration house-
testing procedures-----	keeping quarters, Los Angeles,
11471	GAO review-----
18129	5007
Reliability publication NPC (series)-	Rent:
Relief work:	inadequate, for employee housing in
disaster-----	Indian health program, GAO
Federal manual, committee	review-----
print-----	12206
print additional copies, re-	payment insufficient by Curtiss-
ports-----	Wright Corporation, Wood-
19022, 20468	Ridge, N.J., for commercial
status of funds and summary of	use of Government-owned fa-
allocations to each State, re-	ilities furnished by Air Force
port-----	Dept., GAO report-----
9841	10262
supplies and equipment, inland	redeemable ground rent payments,
transportation charges, agree-	deduction-----
ment with Republic of Korea-----	6293
7455	hearing-----
<i>see also</i> Foreign aid.	7828
Religions:	reports-----
Baptist teachings, Soviet criticism-	4741, 6280
17678	Veterans Administration employees'
Christian, Jewish, and Moslem	quarters, GAO review-----
scriptures, Soviet critique-----	2332
5424	Rental housing, <i>see</i> Housing.
USSR-----	Reorganization of Government activi-
status of churches and theology,	ties, <i>see</i> Government reorgani-
Dutch view-----	zation plans.
15892	Repair parts:
translations-----	aeronautical replacement spare
1105, 5236, 5336, 8573, 8903, 10375,	parts, noncompetitive procure-
12642, 16149.	ment-----
Religious organizations, members	Air Force Dept., GAO follow-up
working abroad, social secu-	review-----
rity coverage-----	13995
10317	Army Dept., GAO follow-up re-
Religious services, Protestant lay	view-----
leader resource guide-----	13996
16456	19287
Reller, John O., Jr., heat transfer to	Navy Dept., GAO review-----
blunt axially symmetric bod-	aircraft, approved and supplemental
ies-----	type certificates summary-----
7240	4221
Relocation (housing), <i>see</i> Redevelo-	automotive, wholesaling, Federal
ment (city planning, etc.).	wage-hour law, application-----
2159	5766
Remer, Ilo, librarian and title three-	electronic, overpricing under Army
Renal diseases, <i>see</i> Kidneys.	Dept. fixed-price contracts with
Renal regulation of bicarbonate loads	Burroughs Corporation, GAO
during hypothermia-----	review-----
4418	8316
Rend Lake Reservoir:	gas turbine engines for military, un-
construction, engineer report-----	der contracts with United Air-
departmental edition-----	craft Corp., Government's loss
453	of capability to procure com-
document edition-----	petitively, GAO review-----
260	13997
modify project-----	industry, aircraft engine parts, out-
law-----	look for 1963 and review of
17052	1962-----
reports-----	5971
13604, 17253	



# INDEX 1963

Entry	Entry
Repair parts—Continued	Reproduction—Continued
ineffective support for combat vehicles by Army Tank-Automotive Center, Detroit, Mich., GAO review	water fleas, affected by concentration of bacteria
lack, resulting impairment of combat readiness of Army combat unit at Fort Meade, GAO report	12720
15592	Reptiles, Yunnan Province, China, material
Navy Department, failure to use excess parts and assemblies in aircraft production, GAO review	16234
5003	Republic of Cameroon, <i>see</i> Cameroun.
overpricing of spare parts and modification kits purchased from Hazeltine Corporation, GAO review	Republic of Chad, <i>see</i> Chad, Republic.
8317	Republic of China, <i>see</i> China.
overprocurement by Navy Dept. of spare guidance components for shipboard repair of Tartar missiles, GAO review	Republic of Congo (Brazzaville), <i>see</i> Congo (Brazzaville).
15597	Republic of Congo (Léopoldville), <i>see</i> Congo (Léopoldville).
pricing of spare parts under Navy Dept. contract with Aeroflex Corporation, Aeroflex Laboratories Division, GAO review	Republic of Dahomey, <i>see</i> Dahomey.
593	Republic of Ivory Coast, <i>see</i> Ivory Coast.
ships spare parts, increased costs resulting from failure to procure competitively or directly from manufacturer, Navy Dept., GAO report	Republic of Korea, <i>see</i> Korea.
17509	Republic of Panama, <i>see</i> Panama.
uneconomical use of parts kits to support depot overhaul activities in Air Force Logistics Command, Air Force Dept., GAO report	Republic of Senegal, <i>see</i> Senegal.
14007	Republic of Somali, <i>see</i> Somali Republic.
use of former Govt surplus parts without authorization under Army Dept. contract with Aerodex, Inc., Miami, Fla., GAO report	Republic of South Africa, <i>see</i> South Africa.
20726	Republic of Vietnam, <i>see</i> Vietnam.
Repair shops, equipment, Federal item identification guides for supply cataloging, supplements	Reque, Robert R., Court of Customs and Patent Appeals, v. 49, customs cases adjudged, etc.
3654	10029
Repair stations, <i>see</i> Aircraft repair stations.	Reschak, Robert J., UH-1B/AN/ASW-12(V) flight evaluation of production configuration
Repairmen, <i>see</i> Mechanics (persons).	13200
REPAS, <i>see</i> Research, Evaluation and Planning Assistance Staff, International Development Agency.	Rescue equipment and appliances, Federal item identification guides for supply cataloging, supplements
Repatriates, North Korea, living conditions	3654
19562	Rescue operations, civil defense basic course instructor's guide
Repellents, reduce deer browsing on ponderosa pine seedlings	18714
19256	Rescue work, national search and rescue manual, amendment
<i>see also</i> Insect repellents—Rodent repellents.	7800
Reporters and reporting, court reporters, furnish transcripts for District Courts, report	<i>see also</i> Mine rescue work.
11845	Research:
Reports:	Education Office cooperative program
required under labor management reporting and disclosure act of 1959—	2148
labor organizations	Education Office cooperative projects
18021	370, 20631
union officials and employees	Federal agencies programs, select committee to investigate expenditures—
18022	create—
to be made to Congress, list	hearings
2032	17187
<i>see also</i> names of departments, etc., issuing reports— <i>also</i> subjects.	report
Reproducing processes, <i>see</i> Duplicating processes.	17136
Reproduction:	expenses for, report
advance, under mature oak stands of New Jersey coastal plain	18880
10235	Government, effect on economic growth, hearings
avian reproductivity inhibition, recent findings	17335
559	Government research reports
ponderosa pine, appraisal of logging damage of advance growth	4250
6485	Hungary—
processes of self-reproduction and evolution, attempt at modeling, USSR study	evaluation, organization and planning at technical universities, problems
5244	991
research related to birth and population control, survey	preparation of annual plans, regulations
18198	15684
rooting of Douglas-fir and true fir cuttings, factors affecting	Independent nonprofit Federal research contractors, staff study
6498	6205
	naval, reviews
	3946
	Post Office Department, report
	5673
	practical, guide
	8100
	projects, faculty and doctoral, in business and economics, survey
	11280
	research and development—
	and innovation, industrial, inquiries into
	11131
	between Agriculture Dept. and Army Quartermaster Corps, progress report
	7417
	In aircraft and missile industry, 1956-61
	11132
	In chemicals and allied products industry, 1956-61
	19986
	research program which will help up-grade local economy (remarks)
	4433
	research utilization series
	19968
	USSR—
	marine biocenosis
	15961
	public inspection of fulfillment of plans
	2772

# JANUARY-DECEMBER

Entry	Entry
Research—Continued	Research Reactor Fuel Element Conference, proceedings, Sept. 17-19, 1962----- 11583
see also Military research—Scientific research—also names of departments, etc., doing research—also subjects.	Research reports:
Research Analyses Office, history----- 16782	Cold Regions Research and Engineering Laboratory----- 2188-89, 4840-42, 6362, 19133-134
Research analysts:	Fish and Wildlife Service- 2297-98, 17462
operations, examination announcement----- 196	School of Aerospace Medicine----- 68
social insurance, examination announcement----- 11667	Social Security Administration----- 14700, 21114
Research and development abstracts of USAEC----- 4145	Underwater Sound Reference Laboratory----- 21058
Research and development report, Atomic Energy Commission- 118-141, 1816-42, 4469-97, 5921-49, 7688-7717, 9667-92, 11552-585, 14953-15018, 16833-861, 18561-601, 20330.	Reserpine, pseudo-Parkinson drug, effects on shivering in cats----- 11493
Research and development series, Army----- 7683	Reserve, La., consumer expenditures and income, 1960----- 14460
Research and statistics legislative notes----- 1497-98	Reserve banks, etc., see headings beginning Federal reserve.
Research and statistics notes----- 1499-1501, 3329-32, 7430-31, 9387, 11287, 14698-699, 16563, 20136, 21113	Reserve components of Armed Forces: credit inactive Reserve service in computing retired pay—
Research Conference in Pulmonary Diseases, translations----- 20221	hearings----- 13640
Research, Evaluation and Planning Assistance Staff, International Development Agency, contract operations, hearings----- 288	report----- 13606
Research Grants Division, NIH, history, organization, functions, 1945-62----- 16423	enlistment programs, etc., amend act—
Research in hospital use, progress and problems, conference report----- 3286	hearings----- 13639, 15376
Research institutes, Soviet institutions, planned expenditures----- 5157	law----- 17040
Research laboratories, AEC's program for interdependence of national laboratories and universities (remarks)----- 13251	reports----- 13543, 15360
see also names of laboratories or places where located.	facilities construction authorization, 1964—
Research memorandums:	hearings----- 11880, 19043
National Advisory Committee for Aeronautics----- 1259-60, 3106-8, 5509-34, 7229-31, 10971-980, 12843, 14528-536, 16354-360, 18116-117.	reports----- 11809, 11818, 19032, 20490
Research notes:	physicians' appointments and residency consideration program, information bulletin----- 10033
Forest Service----- 6504-13, 10231-236, 12166-185, 13984-985, 15559-574, 17476-499, 19253-264, 20694-704.	reorganization, summary----- 99
Intermountain Forest and Range Experiment Station----- 571-572, 6485-86, 10213-214	reserve forces act of 1955, information for enlisted trainees, pamphlet----- 4456
Northeastern Forest Experiment Station----- 6490, 10217-220	see also Army Reserve—National Guard.
Pacific Northwest Forest and Range Experiment Station----- 6491, 8297-98, 10222	Reserve Officers Training Corps, Air Force, military profession today (address)----- 11509
Pacific Southwest Forest and Range Experiment Station----- 6497-99, 10226-229, 12162-163, 15557	Reserve Officers Training Corps, Army:
Rocky Mountain Forest and Range Experiment Station----- 4985-89, 6515-17, 17505	manual----- 5919, 13240
Southeastern Forest Experiment Station----- 6518-23	military profession today (address)----- 11509
Research papers:	Reservoirs:
Forest Service----- 6514, 10237-239, 12186-193, 13986-990, 15575-585, 17500-501, 19265-270, 20705-710.	blue-green algae role in, USSR study----- 8571
Intermountain Forest and Range Experiment Station----- 4983, 6487, 10215, 17473	Columbia River basin, storage in major power reservoirs, monthly report----- 4212
Pacific Northwest Forest and Range Experiment Station----- 6492-93, 10223	fauna enrichment, USSR study----- 6723
Weather Bureau----- 20246	Government constructed, local interests defined—
	hearing----- 19068
	law----- 20429
	report----- 15260
	hydrology of stock-water development in Ely grazing district, Nev----- 5026
	inland, wave action----- 6360
	Pacific Northwest, month-end storage in major reservoirs----- 4212
	regulation, engineering and design manual----- 8196
	survey of world literature, USSR----- 6841
	water losses by evaporation, control research, 1959-60----- 6569
	see also names of reservoirs.
	Reshotko, Eli, resonance in cold multiconstituent plasma at arbitrary orientation to magnetic field----- 16391
	Residences, see Houses.
	Residential construction, see Building.
	Residential redevelopment, see Redevelopment (city planning, etc.).

# INDEX 1963

Entry	Entry
Resins:	Respiratory system:
ion exchange, purification of fluorescent conjugates from free fluorochrome, USSR study.....	health, relationship to air pollution.....
materials, U.S. production and sales, preliminary report.....	human, maximum pressure-volume relationships, effect of decreased barometric pressure.....
pine, volatility and vapor saturation.....	rats, pulmonary effects of cold acclimatization and norepinephrine calorigenesis.....
preventing dermatitis if you work with epoxy resins.....	Response of hardwood seedlings to inorganic fertilizer.....
see also Plastics.	Restaurants, lunchrooms, etc.: bibliography.....
Resistance, see Electric resistance.	dairy products, use and promotion.....
Resistance of barge tows, supplement.....	design and construction of food service facilities, engineering manual.....
Resistance of insects to ultra-low temperatures, USSR.....	services of institutional wholesale grocers, opinions.....
Resistance to disease, see Diseases.	workers, coverage under Fair labor standards act, extend investigation, hearings.....
Resistors, see Electric resistors.	Restuccia, Vincenzina C., relief.....
Reskin, Gertrude, relief.....	Resuscitation:
Resolutions:	cardiopulmonary, aeromedical review.....
digest.....	cardiopulmonary, heart-lung, Coast Guard pamphlet.....
history.....	methods used in therapeutic clinic for treatment of terminal states.....
see also House bills—Law—Senate bills.	Retail credit, and collections, bibliography.....
Resolvers, see Electric resolvers.	Retail stores, see Stores.
Resonance:	Retail trade:
Fabry-Perot LASER.....	advance monthly retail sales report.....
in cold multiconstituent plasma at arbitrary orientation to magnetic field.....	careers for women.....
nuclear, s-type used for multiple scattering of polarized and unpolarized neutrons.....	census of business, 1958, Puerto Rico.....
see also Magnetic resonance.	current retail trade reports.....
Resonance integrals, see Neutrons.	discount retailing, bibliography.....
Resonators, 3-dimensional, with grate partition, internal oscillations, USSR study.....	employee earnings.....
Resort areas:	building materials, hardware, and farm equipment.....
Caucasus coastal resorts, guide book, USSR study.....	departmental edition.....
climatic summaries.....	document edition.....
Resource bulletins, Forest Service.....	drug and proprietary stores.....
15586-588, 17502-504, 19271-273	departmental edition.....
Resources, see Natural resources.	document edition.....
Resources analysis memo.....	food and grocery stores.....
Respicio, Margarita M., relief.....	departmental edition.....
Respiration:	document edition.....
artificial—	furniture, home furnishings, and household appliance stores.....
cardiopulmonary resuscitation, Coast Guard pamphlet.....	departmental edition.....
prolonged, improving modern apparatuses, USSR study.....	document edition.....
chlorella, participation of phosphopyridine nucleotides, USSR study.....	overall survey.....
electrometric method of determining oxygen content of expired air, USSR study.....	departmental edition.....
gas exchange dynamics in white mice exposed to high partial pressure of oxygen, USSR study.....	document edition.....
injuries, USSR studies.....	preliminary release.....
rate, and catecholamine release from adrenal slices.....	fair labor standards act, provisions.....
relationship of breathholding ability, etc. to performance in pressure chamber and escape training tank.....	food products, effect on sales by combining kinds of retailer promotions.....
respiratory function studies during prolonged exposure to simulated altitude without hypoxia.....	insurance management in small firms.....
Respiratory equipment, see Breathing apparatus.	operating costs and ratios, bibliography.....
Respiratory organs, influenza and acute catarrh of upper tract, dispensary treatment problems, USSR study.....	report, annual, 1962.....
	report, monthly.....
	restrictions on purchase of goods by nonmarket consumers, Czechoslovakia.....
	retailing, bibliography.....
	stores, sales, weekly.....
	see also Salesmen and salesmanship—Stores—also names of commodities and industries.
	Retina:
	photostress test for evaluation of macular function.....
	receivers, spectral sensitivity determination in experiments with dichromates, USSR study.....

# JANUARY-DECEMBER

	Entry		Entry
Retina—Continued		Revised statutes of U.S., <i>see</i> Codes of law.	
red-green sensitivity as function of retinal position.....	9102	Revisionism, Tito's views.....	15998
Retired officers, etc., Navy and Marine Corps guide to employment activities.....	12771	Revisionist at work (address).....	494
<i>see also</i> Armed Forces.		Revolution, 1775-83, American marines, 1775-85, chronology.....	16306
Retired pay, <i>see</i> Annuities—Pensions.		Revolutionary War, <i>see</i> Revolution, 1775-83.	
Retirement:		Revolutions:	
Air Force officers, prediction.....	4403	agricultural, causes and effects (address).....	5841
Armed Forces members, in highest grades—		Italian Communist views.....	2946
hearings.....	18920, 18924	Latin America, translations.....	8981
report.....	18842	Revolvers, use and care.....	12970
Central Intelligence Agency employees improved system—		Revolving funds:	
hearings.....	18923-924	adjustable capital plan for farmer cooperatives.....	12093
reports.....	18844, 18902	Indian loans to procure assistance before Indian Claims Comm., reports.....	13593, 17269
health benefits program for retired Federal employees, act of 1960, administrative expenses—		<i>see also</i> Correctional Industries fund.	
hearing.....	9945	Rewards (prizes, etc.):	
report.....	7952	Armed Forces decorations and awards (poster).....	18538
Income of the aging, hearings.....	325, 2084	awards and honors for Federal scientists and engineers, current information.....	20380
Judges of D.C., retirement and disability act, amend, report.....	18897	Gold Seal Conservation Award, presentation (remarks).....	16760
now that you are retiring, general information.....	13048, 21111	Hungary, Kossuth-prize winners, 1963, list.....	17811
patterns, New York City employees.....	21113	recognition of employees, supervisor development program, basic course.....	4447
planning for later years.....	21112	school fallout shelter design, national competition.....	9740, 13317
preparing for retirement, selected list of references.....	3381	USSR—	
public employee credit transferability among Government units, commission report.....	9524	awards to engineers, technicians, institutions, etc.....	15740
public employee retirement systems, benefits and beneficiaries, 1962.....	11287	law on labor incentives.....	6867
self-employed individuals tax retirement act of 1962, provisions.....	1497	Lenin prizes—	
social security benefits, you don't have to retire completely to get them.....	5661	awarded Soviet mathematicians.....	6801
State and local governments employee-retirement systems.....	18642	winners, science and engineering works accepted in competition.....	12446, 5153, 8963
State and local government systems covering workers also covered under Federal old-age, survivors, and disability insurance program, 1961, survey.....	3244	Lev Davidovich Landau, Nobel prize winner.....	10663
<i>see also</i> Civil service pensions—Coast Guard—Foreign service—Pensions—Railroad employees.		orders and medals awarded for construction, etc., of power machinery, list.....	15824
Retirement and disability fund, <i>see</i> Civil service pensions.		William F. Patterson Apprenticeship Memorial Award, 1st 10 winners, 1962.....	16814
Retracting Fulton skyhook yoke on Army type CV2B (Caribou) aircraft.....	20207	Reyff, Paul A., electrical shock, much-misunderstood hazard.....	9039
Retrorockets, heat transfer to sphere with retrorocket exhausting into free-stream.....	1210	Reynafarje, Baltazar, pyridine nucleotide oxidases and transhydrogenase in acclimatization to high altitude.....	4410
Reuss, M. L., Jr., ferrite-loaded open transmission line.....	18231	Reynolds, Hudson G.:	
Revenue:		effect of logging on understory vegetation and deer use in ponderosa pine forest of Arizona.....	4987
carload waybill statistics, 1961—		mesquite control on southwestern rangeland.....	13171
forest products.....	10350	use of natural openings in ponderosa pine forests of Arizona, etc.....	4986
mileage block progressions by commodity groups and classes.....	14075	Reynolds, James E., modification of experimental track firing programmer and control system.....	5857
State-to-State distribution, all commodities.....	10348	Reynolds, John M., legislative history of cloture rule.....	17194
permits for hunting and fishing in national forests, unauthorized diversion of revenues by Forest Service.....	2335	Reynolds, M. B., slow cycle strain fatigue in thin wall tubing.....	5931
State and local governments in Great Plains.....	4802	Reynolds, T. W.:	
<i>see also</i> Internal revenue— <i>also</i> names of articles, etc., from which revenue is derived.		aircraft-fuel-tank design for liquid hydrogen.....	10973
		effect of dissociation on exhaust-nozzle performance.....	16356

# INDEX 1963

Entry	Entry
Reynolds, Thaine W., thermionic emission from cesium-coated ion-thruster electrodes.....	19916
Reynolds numbers, effects on stability at hypersonic speeds.....	11033
RFC, <i>see</i> Reconstruction Finance Corporation.	
Rhenium:	
all-Union conference, USSR.....	14163
behavior in molybdenite concentrates, USSR study.....	14331
obtained from USSR powder metallurgy.....	5404
powder, production by electrolytic and autoclave method, USSR experiment.....	7000
sources and recovery methods.....	12839
Rheumatic fever, prevalence among school children in Ufa, USSR study.....	8066
Rheumatism:	
children, USSR conference, proceedings.....	20912
health information series.....	16502
<i>see also</i> Rheumatic fever.	
Rhode Island:	
county business patterns, activities covered by OASDI program.....	11614
errata.....	18669
electric rate book.....	512
geology of selected quadrangles (series).....	19298-299
landings, fishery products.....	4156, 10187
mineral industry, minerals year-book chapter.....	19853
operate bridge across Mount Hope Bay—	
law.....	18785
reports.....	17250, 18861
population, 1960, characteristics.....	18662
women workers, 1960.....	21181
ZIP code directory.....	20064
Rhodes, John D., tributes upon retirement.....	17193
Rhodesia and Nyasaland, Federation of, <i>see</i> Federation of Rhodesia and Nyasaland.	
Rhodium isotopes, 102, high altitude tracer experiment, stratospheric results.....	1732
Rhododendron, control by basal spray.....	10217
Rhubarb, production, outdoors and in.....	5823
Rhyacophilidae, <i>see</i> Caddis flies.	
Rhyolite, mercury prospect, Kuskokwim River Basin, Alaska trenching and sampling.....	3096
Ribbons for typewriters, etc.:	
cotton cloth, Tariff Commission report.....	20197
fabric, Federal standard.....	19216
in-office reproduction methods using GSA supplies.....	539
teletypewriter, Federal standard.....	19218
Riboflavin, <i>see</i> Vitamins.	
Ribonucleic acid:	
depolymerized yeast, effects on radiated human cells in tissue culture.....	5888
protein synthesis, RNA, and genetics, relationships, USSR studies.....	17992
Ricciuti, Robert A., world survey of abrasive products, 1957-62.....	13268
Rice, A. C., chelating agents in separation of rare-earth compounds by solvent extraction with amines.....	7226
Rice, Katherine E., economic developments in Mexico.....	2422, 8414
Rice, Richard P.:	
basic data on economy of Guatemala.....	6588
investment in Nicaragua.....	2395
living conditions in Guatemala.....	6601
Rice:	
acreage allotments, validity—	
hearing.....	9919
law.....	20441
reports.....	15250, 17296
acreage history transfer, amend 1938 law—	
hearing.....	9919
reports.....	9886, 13780
California stocks and movement report.....	3494
export marketing problems (address).....	15545
foreign agriculture circulars.....	3720
foreign trade prospects.....	10208
gene symbolization and linkage groups.....	1626
market news.....	4157
supplement, rough rice receipts.....	4158
rough—	
effects of moisture content, humidity, and length of storage on quality maintenance.....	9580
insect prevention and control.....	18431
situation and outlook, 1963.....	4805
southern, inspected for export.....	4199
stocks, rough and milled.....	4159
U.S. exports under Government programs, 1961-62.....	4977
Rice borers, <i>see</i> Asiatic rice borer.	
Richard, Dorothy E., United States naval administration of Trust Territory of Pacific Islands.....	14623
Richards, Eurina P., relief.....	15195
cooling characteristics of corrugated-insert air-cooled turbine blade for use in turboprop engine.....	1268
influence of fluorine environment on mechanical properties of sheet alloys.....	9176
Richards, R. J., literature on heat transfer from solid surfaces to cryogenic fluids.....	9210
Richardson, Carlton M., relief.....	13697, 15219, 17011
Riche, Richard W.:	
impact of automation in pulp and paper industry, 1947-60.....	1185
impact of office automation in Internal Revenue Service.....	18040
office automation in Federal Government.....	14479
Richey, Eldred T., measurement of effects of epinephrine, etc., on EEG activation response.....	5886
Richland Creek:	
engineer report—	
departmental edition.....	454
document edition.....	268
Richmond, Ky., motor carrier accident.....	14077
Richmond, Va.:	
Byrd Field, weather observations, hourly, decennial census.....	11406
occupational wage survey—	
departmental edition.....	5446
document edition.....	4702
Rickenbacker, Joseph E., safety-checking livestock trucking to reduce loss and damage.....	8206
Rickert & Laan, Inc., relief.....	15198
Ricketts' organism, antibodies, detection by luminescent-serological method, USSR study.....	14140
Rickettsia prowazekii, <i>see</i> Ricketts' organism.	
Rickettsial diseases, fluorescent antibody research, USSR articles.....	15845
Ried, Robert C., Jr., Newtonian static, etc., coefficients for body of revolution with offset center-of-gravity location.....	14546
Riesgo, Raymond R., economic developments in Italy, 1962.....	8397



	Entry		Entry
Rifle practice, <i>see</i> Target practice.		Rivers—Continued	
Rifles, squad fire technique, tactical application, field manual	11532	oxygen relationships in streams, proceedings of seminar, 1957	16519
Rigby, Lynn V., integrated system design for maintainability	1767	physiographic and hydraulic studies (series)	15612, 17528
Rigging, <i>see</i> Masts and rigging.		pollution, record of defilement	11246
Riggins quadrangle, Idaho, Columbia River basalt	2342	radionuclide studies, symposium	12990
Riggins region, Idaho, metamorphism	20735	river basin commissions, establish, hearings	19061
Riggs, C. H., petroleum engineering study of Hail-Gurney oilfield	5476	river basin planning, relationship to program of ARA (remarks)	11527
Rights (civil), <i>see</i> Civil rights.		river basin planning seminar, Ft. Belvoir, Va., May 27-31, 1963	20651
Rights of persons, <i>see</i> Civil rights.		river basin surveys papers—departmental edition	13230
Rights-of-way, <i>see</i> Railroads—Roads and highways.		figures	11522
Riley, William H., investment factors in Thailand, 1962	2425	document edition	13443
Ringel, S. M., some quality changes in onions during marketing	5	sediment loads in streams, measurement and analysis	14049-51
Rings, as decelerators at Mach nos. 1.57 to 4.65, aerodynamic characteristics	11065	southern Wisconsin, sediment characteristics of small streams	8355
Ringstrom, N. H., small business success and failure cases	1468	stream catalog of southeastern Alaska—regulatory district no. 2	13976
Rio Abajo, Bolivia, Communists incite disturbances	2662	regulatory districts nos. 3 and 4	20688
Rio Acima quadrangle, Brazil, geology and ore deposits	601	streamflow and drainage density, investigation	17528
Rio Grande and Valley: drought effects in basin	8335	streamflow data, far western States	6568
engineer report—departmental edition	455	streamflow minimums, and rainfall, autocorrelation	6557
document edition	314	streamflow records, automation	19303
packing mature green tomatoes, quality, costs, and margins in lower Valley of Texas	20287	surface streams, ground-water movements and bank storage due to flood stages	19322
tomato prices and market structure, Texas	9577	transport of radionuclides by streams (series)	10292
vertical distribution of velocity and suspended sediment, middle channel of river	19319	uptake and transport of radionuclides by stream sediments	10292
water supply outlook and snow surveys of drainage basins	4285	West Virginia mountains, four forest practices effect on streamflow	10238
Riots: Israel Communist press comments. La Paz, Oct. 26, 1962	825 928	<i>see also</i> names of rivers, or places where located.	
Ripening of fruits, etc., <i>see</i> names of fruits, etc.		Rivers and Harbors Board, transfer certain functions of Beach Erosion Board to, reports	13708, 18905
Ripley, Thomas H., recreation impact on southern Appalachian campgrounds and picnic sites	6525	Riverside, Calif.: occupational wage survey—departmental edition	5438
Rippy, Mary A., data on patients of outpatient psychiatric clinics in U.S., 1961	9221	document edition	4694
Ririe Dam and Reservoir: flood control, etc., engineer report—departmental edition	2219	Riverside County, Calif., Pinto Basin, Joshua Tree National Monument, reconnaissance	5028
document edition	1997	Riverton project: water delivery to lands in 3d division—law reports	9806 7923, 8063
Rivers: alluvial channels, tentative classification	19305	RNA, <i>see</i> Ribonucleic acid.	
basin development, papers prepared for United Nations conference	5094	Roach, James F., electromagnetic shock tube for generating strong shocks in air	19925
basin planning act of 1964, hearings	19061	Road machinery, maintenance equipment, Federal item identification guides for supply cataloging, supplements	3652
basin plans, additional authorization, reports	9912, 13560, 13779, 18873	Roads and highways: approach roads, Greenland 1956-57 program	10093
chemical composition, geochemistry data	6558	Arizona, construction practices, hearings	13668
daily stages, 1960	13117	bond financing, analysis 1950-62	21097
flood control, 1962, hearings	301, 13667, 15330, 17183	Chicago Skyway toll bridge, operate as freeway—hearings	17185
fluvial sediments, distribution, discharge, etc.	19301	report	18872
hydrology of tidal streams (series)	611, 15617	code of Federal regulations	4909
low-flow frequency curves for stream-gaging stations in eastern U.S.	14035	construction usage factors for cement, pipe, etc.	20117
low flow probability distribution, analysis	10293	Democratic Republic of Vietnam, road building under tropical conditions	10433

# INDEX 1963

Entry	Entry
Roads and highways—Continued	Roads and highways—Continued
effect of road design on hauling costs of logs, logging road handbook, addenda-----	prefabricated surfacing membrane investigation-----
4347	2228
everybody's mile (remarks)-----	public roads (periodical)-----
13348	4117
explorers' routes and early roads in U.S., maps, list-----	publications, price list-----
1192	11220
Federal-aid highway act amendments of 1963—	right-of-way training program, Public Roads Bureau-----
hearings-----	11251
15331	road construction, cybernetics should be used, USSR study-----
20438	2759
reports-----	roadbank erosion and its control in Piedmont upland of Georgia-----
13615, 13620, 19018	20262
Federal aid program—	roads and trails for national forests, construct and maintain, hearings-----
construction engineering, increase limitations on payments—	17331
hearing-----	safety action program, research-----
13821	16542
report-----	severance damage studies, manual, supp-----
13713	3305
objectives (address)-----	snow stabilization for construction-----
9773	19135
progress (remarks)-----	Southeastern Regional Research Conference proceedings-----
5700	3303
urban highway funds, equitable apportionment—	statistics, 1961-----
hearings-----	9366
13821, 15331	technology, determining courses of study in vocational education-----
20438	6346
reports-----	13615, 13620, 19018
20438	Thailand, ground mobility-----
19018	13888
Virginia—	traffic control devices, manual, construction and maintenance operations-----
design, etc., GAO review-----	16541
5008	traffic safety, bibliography-----
right-of-way, activities of Public Roads Bureau, GAO review-----	7413
12214	transportation facilities development termination, agreement with—
<i>see also</i> , below, Interstate system.	India-----
Federal assistance available when natural disaster damages roads, streets, bridges-----	13077
14680	Nepal-----
Federal construction programs in eastern U.S. administered by Public Roads Bureau, interagency problem areas and deficiencies, GAO report-----	13077
19282	urban areas, gravity model, calibrating and testing-----
fills, determining downward movement of seeds-----	14679
13985	<i>see also</i> names of roads or highways.
highway progress, 1962-----	Roanoke, Va., Woodrum Field, weather observations, hourly summary, decennial census-----
5699	16666
highway safety, concern of Federal Government (remarks)-----	Roanoke River and Valley, interagency archeological salvage program, figures-----
20116	11522
highway trust fund, financial conditions and operations, 1962 report-----	18973
6090	Robbins, Hannah, relief-----
highways and petroleum, twin factors in progress (remarks)-----	Robert A. Taft Sanitary Engineering Center: publications, list-----
9367	14670
improving safety and service of highway transportation system (remarks)-----	technical reports-----
20119	9350-51, 11245, 14670, 16519-532
interstate system—	Water Supply and Pollution Control Division, activities of Research Branch-----
completion—	16529
hearings-----	water supply and water pollution program, seminar 1957, proceedings-----
13821, 15331	16519
20438	Robert S. Kerr Lock and Dam: designate—
reports-----	hearings-----
13615, 13620, 13712, 19018	13667
design to accommodate traffic forecast for 1975, GAO review of problems-----	13436
12210	reports-----
11250	9860, 13710
route log and finder list-----	Roberts, Charles T., guide for implementing handbook 3, property accounting for school systems-----
10231	8172
logging roads, insloped and out-sloped, effect of severe rainstorms-----	Roberts, Clarence L.: Air Force Flight Test Center, reliability literature survey-----
10231	7609
maintenance, engineered performance standards—	upgrading category II/III testing with reliability and maintainability techniques-----
formulas-----	16774
11421	Roberts, Ernest, Jr., determining elastic state of thermal stress in thin flat plate-----
11422	18140
Massachusetts, right-of-way acquisition practices, report-----	Roberts, Frank H. H., Jr., river basin surveys papers, interagency archeological salvage program-----
15258	13230
military—	Roberts, George W., presentation on Caribbean demographic position-----
construction, basic principles-----	13663
5919	Roberts, Jean, comparison of 2 vision-testing devices-----
planning, site selection, and design in theater of operations, technical manual-----	14673
20328	
military installations, flexible pavement design for streets, walks, etc., engineering manual-----	
4865, 19143	
planning—	
after 1972 (remarks)-----	
21099	
importance of relations, integrity, and progress (remarks)-----	
3304	
map manual-----	
21098	
notes-----	
9365	

	Entry		Entry
Roberts, Kenneth A., panel presentation, Dec. 11, 1962-----	1426	Rock drilling:	
Roberts, Steve, testimony, additional copies, report-----	11857	deep drilling as method of studying earth's crust, USSR study-----	14289
Roberts, Thomas L.: inactivation of encysting Azotobacter cells by ionizing radiation-----	16793	geothermal gradient measurement in drill holes less than 60 feet deep, East Tintic district, Utah-----	15606
Martian simulated environment, bacterial survival, etc-----	83	laboratory studies of variables in rotary drilling-----	3087
studies with simulated Martian environment, bacterial synergism-----	7638	Silver Summit Mine, Hecla Mining Co., Shoshone County, Idaho-----	10937
Roberts, W. A., ejecta studies-----	11574	stresses of drill bit and rock under static loads-----	5495
Robertson, Harry P., mineral industry of Puerto Rico, Panama Canal Zone, Virgin Islands, and Pacific Island possessions-----	19852	Rock Island, Ill.: occupational wage survey----- departmental edition-----	5445 4701
Robertson, J. L.: remarks----- Dec. 10, 1962-----	530	Rock Island Dam, fish passage report, 1961-----	6464
May 14, 1963-----	10182	Rock phosphates, minerals yearbook chapter-----	18089
Oct. 3, 1963-----	19206	Rock River: flood control, engineer report----- departmental edition-----	456 323
Robertson, O. T., pink bollworm kill with improved gin equipment-----	13184	Rockets: ablative-material performance after postrun cooling at altitude pressures-----	12863
Robertson, Roger L., National Institute of Mental Health, training grant program, 1948-61-----	1336	air-turborocket engine performance-----	5520
Robertson, Stanley M., soil survey of Habersham County, Ga-----	14701	Atlas vehicle, noise measurements during captive and launch firings-----	1298
Robins, Charles J.: availability of ground water in Bear River Valley, Wyo-----	8343	Blue Scout and Blue Scout, jr., research vehicles, static stability characteristics at Mach nos. 2.29 to 3.75-----	14581
geology and ground-water resources, Greybull River-Dry Creek area, Wyo-----	8345	chemical reaction between propellant tank material and rocket fuels or oxidizers when impacted by small high-velocity projectiles-----	16393
ground-water resources and geology of Lyman-Mountain View area, Wyo-----	20744	combustors, effect of gas flow transients on heat release of burning liquid drops-----	9153
Robins, A. Warner, force, etc., measurements on canopy-fuselage configurations-----	5531	electrostatic, applying field-ion emission-----	5585
Robinson, A. R., distribution, control, and measurement of irrigation water on farm-----	13178	engine----- ammonia-oxygen, injector techniques with 200-pound-thrust, electrostatic, space-charge-flow theory and electrode design-----	1288
Robinson, Edwin Arlington, reappraisal, bibliography, and list of materials in Library of Congress exhibit-----	9088	three vehicle configuration, static aerodynamic characteristics of at Mach numbers from 1.80 to 4.63-----	14579
Robinson, G. D., geology of Three Forks quadrangle, Montana-----	12228	using liquid oxygen and liquid ammonia, evaluation of injector principles in 2400-pound-thrust-----	10987
Robinson, H. W., and Co., Inc., relief-----	15227	far-field acoustic environments due to moving sound source, predicting technique-----	16384
Robinson, J. W., ground water in Prineville area, Oreg-----	8349	firings----- meteorological aspects of stratospheric circulation over U.S., winter, 1961-----	16376
Robinson, Mercedes, see Orr, Mercedes R.		single station doppler-interferometer tracking technique-----	3123
Robinson, Ross B., low-aspect-ratio cruciform-wing configuration employing canard and trailing-edge flap controls, aerodynamic characteristics-----	14540	helium concentrations downstream of vent exhausting helium at sonic velocity into supersonic stream-----	11063
Robinson, Vernon L.: 1961 pulpwood prices in Southeastern pulpwood production, 1961-----	6521 10242	hourly soundings, mesospheric wind observations-----	18451
Robinson, W. E., oxidation of Colorado oil shale-----	5492	injection processes for 15-percent fluorine-85-percent oxygen and heptane in 200-pound-thrust engine-----	5524
Rochester, N.Y.: electric facilities of area, map-----	516	ion----- electron bombardment, charge-exchange effects on accelerator impingement-----	11040
Rochester Airport, weather observations, hourly, decennial census-----	20240		
Rock Creek, upper watershed project, hearing-----	13823		
Rock Creek Nature Center, explore the woodland, nature walk-----	1351		
Rock Creek Park, general information-----	5642, 16442		

# INDEX 1963

Entry	Entry
Rockets—Continued	Rockets—Continued
ion—Continued	Scout launch vehicle—Continued
electron-bombardment, operated	static aerodynamic character-
with alternating-current sup-	istics and surface pressure
plies	distributions for $\frac{1}{15}$ -scale
engine using rectangular-slab	model of 4-stage configura-
porous-tungsten emitter	tion
jets exhausting upstream and	Scout model of 3-stage vehicle,
downstream, pressure distribu-	aerodynamic loading charac-
tion induced on flat plate	teristics
large solid propellant boosters,	Scout reentry vehicles, aerodynam-
development	ic characteristics of 5th-
launch deflector design criteria and	stage
application to Saturn C-1 de-	Scout research vehicle—
flector	effects of simulated bending and
launch vehicles of national launch	4th-stage size on local pres-
vehicle program, description	sures and normal-force distri-
liquid-vapor interface configura-	butions at Mach number
tion, effect of surface energy	3.10
during weightlessness	orbital error analysis
lunar landing propulsion considera-	solid-propellant—
tions	erosion resistance and failure
mastodon or orbital rendezvous,	mechanisms of nozzle materi-
USSR study	als
motor cases, ultra high strength	ignitability with chlorine tri-
steel, evaluation of electron	fluoride
beam welding	variable-throat-area convergent-
motor casings, resistance to crack	divergent nozzles effect on
propagation of high-strength	thrust modulation, investi-
sheet materials	gation
motors, gaseous-film cooling	sound—
Nike Apache performance hand-	air launched from F-104a air-
book	plane, use as 1st-stage booster,
nonlifting reentry capsule in com-	operational aspects
bination with rocket booster,	development in Japan
static aerodynamic and control	pitch-roll resonance conditions,
characteristics	steady-state and 6-degree-of-
nozzles, asymmetric penshape in	freedom analyses
jet-cannard configurations for	stellar spectrophotometry above
attitude control	atmosphere
nuclear—	technology, atmospheric ballistics
convective heat transfer in noz-	Trailblazer I reentry-body wind
zle	tunnel tests
development program, hearings	Trailblazer II 3-stage rocket ve-
materials, advanced research	hicle having various fin con-
optimizing nozzle performance	figurations, static aerodynamic
perigee propulsion for orbital	characteristics at low subsonic
launch	Mach numbers and angles of
propulsion, papers	attack up to 28°
space exploration missions (re-	200-pound-thrust JP-4 nitric acid
marks)	engine, low-temperature chemi-
single-cavity vortex gaseous, per-	cal starting using 3-fluid prop-
formance capability	ellant value
observations of solar protons dur-	unmanned, Federal aviation regu-
ing Nov. 1960	lations
operating, study of ballistic mis-	use in meteorological investiga-
sile base heating	tions
performance, IBM 704 or 7090	USSR—
computer program for compu-	interplanetary rocket to Mars
tation	troops, translations
propulsion—	vibratory environments, localized,
chemical, papers	predicting techniques
fighter-type airplane, rolling ef-	weapon system mounted in HU-1B
fectiveness of wing-control	helicopter, flight test evalua-
configuration at Mach num-	tion
bers of 0.6 to 1.5	weather, USSR study
radio attenuation measurement,	X-259 motor, mechanical imped-
4-stage solid propellant ve-	ance study
hicle used	see also Retro-rockets.
research aircraft program, major	Rockford, Ill.:
events and achievements,	occupational wage survey—
1946-62	departmental edition
Saturn C-1, supersonic investiga-	document edition
tion of nozzle hinge moments	Rock River flood control, engineer
with and without jet flow	report—
Saturn model, base heat transfer,	departmental edition
pressure ratios, and configura-	document edition
tion effects	Rockport, Mass.:
Scout development vehicles, analy-	beach erosion control study, engi-
sis of coning motions of final	neer report—
stages	departmental edition
Scout launch vehicle—	document edition
in-flight aerodynamic noise meas-	
urements	

# JANUARY-DECEMBER

	Entry		Entry
Rocks:		Rodenhisser, H. A., panel presentation, Dec. 11, 1962	1418
Columbia River basalt in Riggins quadrangle, western Idaho, characteristics	2342	Rodent repellents, arasan-endrin mixture, tests on acorns	12184
crushing, new methods	85	Rodenticides:	
crystalline, of Potomac River gorge, metamorphic history, etc.	19317	Federal insecticide, fungicide and rodenticide act, amend—	
Guam, petrology of volcanic rocks	15611	hearings	18917, 19041
lithology of manganese deposits of Maple and Hovey Mountains area, Aroostook County, Maine	6554	report	19034
Magnet Cove, petrology of alkaline igneous complex	12229	notice of judgment	9549, 16718
metasedimentary and metavolcanic, origin and metamorphism, Riggins region, Idaho	20735	Rodents, control in nursing homes—	13010
mine, triaxial apparatus for testing	20972	see also Porcupines.	
paleozoic, of Antelope Valley, Eureka and Nye Counties, Nev.	10291	Rodriguez, R. F.:	
Pennsylvanian age, Tremont quadrangle, Pa., geology	5013	economic developments in Venezuela, 1962	8410
Pennsylvanian and lower Permian, west and central Texas (series)	19309	establishing business in Peru	2421
Pennsylvanian and Permian, Kansas, stratigraphy and paleontology	8334	licensing and exchange controls of Venezuela	8415
Pennsylvanian limestones from central Texas, petrography and environmental analysis	19309	Rods:	
petrography of basalt beneath limestones, Eniwetok Atoll	19308	steel wire, determination of no injury, etc., to U.S. industry by imports from—	
petrography of igneous rocks	12228	Belgium	13094
petrography of some sandstones and shales of Paleozoic age from borings in Florida	15613	France	14739
petrology, 2 layered gabbro stocks in Fairweather Range	10279	Luxembourg	13095
porous, permeability, rapid determination	1238	West Germany	13096
Precambrian, in southern Black Hills (series)	15608	Roe, Eugene I.:	
stress, determining	20969	direct seeding of conifers in Lake States, review of past trials	12188
talc-bearing ultramafic and adjacent country rocks in north-central Vermont, petrology and geochemistry	603	seed stored in cones of some jack pine stands, northern Minnesota	6514
uranium in carbonate rocks	17529	Roentgen irradiation, see X-rays.	
see also Gabbro—Sedimentary rocks.		Roentgenology:	
Rocky Mountain Forest and Range Experiment Station:		Moldavian SSR conference	19533
publications, list	15554	USSR, translations from Vestnik rentgenologii i radiologii	6642
research notes, 4985-89, 6515-17, station papers, 4990-92	17505, 10240	Roger Mills County, Okla., soil survey	18317
Rocky Mountain National Park:		Rogers, George B., costs and economics of scale in turkey processing plants	18434
general information	11122	Rogers, Samuel M., digest of State air pollution laws	1404
natural history handbook	18208	Rogers, T. A., temperature effects on magnesium metabolism	18471
Rocky Mountain States:		Rogier, George A., growing Russian wildrye in Western States	18430
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4571	Rogoff, Martin H., materials in coal inhibitory to growth of microorganisms	18097
census of housing, 1960, standard metropolitan statistical area, tenure, rooms, condition and plumbing, etc.	1917	Rogue River Basin:	
conifer stands, composite aerial volume tables	20697	flood control survey, engineer report—	
county business patterns, activities covered by OASDI program	15054, 18677	departmental edition	4868
national forest recreation in intermountain region	582	document edition	4684
small business problem studies	1473	Rogus, B. J., fracture characteristics of aluminum alloys wetted with liquid zinc amalgam	20012
Rocky Mountains:		Rolthmayr, Charles M., distribution of fishing by purse seine vessels for Atlantic menhaden, 1955-59	8281
comandra blister rust in central region, reports of outbreaks	6515	Rolfe, S. T., crack propagation in low-cycle fatigue of mild steel	14686
geology at head of Missouri River, restudy of area	12228	Roll:	
		delta configuration, 79° clipped, rolling motions with wing-tip fins	20996
		sounding rocket, pitch-roll resonance conditions steady-state and 6-degree-of-freedom analyses	12882
		three-stage missile configuration	10996
		wing-control configuration for fighter-type airplane at Mach numbers from 0.6 to 1.5, effectiveness	14532
		Rollbuhler, R. James, rocket-engine ablative-material performance after postburn cooling at altitude pressures	12863
		Rollin, S. F., Federal seed act, questions and answers	13143



# INDEX 1963

Entry	Entry
Rolling mills: manufacture of spur gears by rolling, USSR study-----	12363
metal-ceramic, description, USSR study-----	12343
Rollinson Channel: navigation improvements, engineer report-----	458
departmental edition-----	228
document edition-----	228
Rolls, L. Stewart, flight evaluation of lunar landing trajectories, etc.	5601
Roman, James A.: elevator illusion during subgravity preceded by negative accelerations-----	16791
sensitivity to stimulation of semi-circular canals during weightlessness-----	7636
Romancier, R. M., management of small woodland holdings in Georgia Piedmont-----	10247
Rome, N.Y., water resources of area-----	5030
Rome Air Development Center, technical documentary reports-----	11513, 18497-498
Rome Institute for Unification of Private Law, <i>see</i> International (Rome) Institute for Unification of Private Law.	
Romeo, David J.: aerodynamic interaction effects ahead of rectangular sonic jets-----	11069
forward-facing jet effect on bow shock of blunt body, etc-----	7264
Romer, A. Russell: economic developments in Greece, 1962-----	8403
establishing business in Greece-----	2392
Romero, Petra, formaldehyde perfusion and methylene blue gross staining technic in dry fixation of lung tissue-----	5889
Romerstein, Herbert, Communist International youth and student apparatus-----	17317
Rondout Creek: flood control improvements, engineer report-----	2220
departmental edition-----	2069
document edition-----	307
Ronstadt, Robert C., testimony-----	307
Roofing: asphalt and tar, current industrial reports-----	3574
summary, 1962-----	11616
Roosa, Robert V., remarks, Jan. 16, 1963-----	3388
Roosevelt, Eleanor: eulogies, print as House document, report-----	11854
5-cent commemorative postage stamp (poster)-----	18268
Roosevelt, Eleanor, Memorial Foundation, <i>see</i> Eleanor Roosevelt Memorial Foundation.	
Roosevelt, Franklin D., Home, National Historic Site, <i>see</i> Home of Franklin D. Roosevelt National Historic Site.	
Roosevelt, Franklin D., Jr.: address-----	9781
Apr. 27, 1963-----	18748
Sept. 20, 1963-----	8096
nomination, hearings-----	8096
Roosevelt, Franklin D., Library, <i>see</i> Franklin D. Roosevelt Library.	
Roosevelt, Theodore, Sagamore Hill National Historic Site, acceptance of deed (remarks)-----	14055
Root rot: annosus, in eastern pines-----	10210
Armillaria, general information-----	17472
Roots, Douglas-fir and true fir cuttings, factors affecting growth-----	6498
Rope, Federal item identification guides for supply cataloging, supplements-----	3654
<i>see also</i> Wire rope.	
Rosamond quadrangle, Calif., geology-----	10276
Rose, Homer C., skills of management and supervision-----	10103
Rosebud Reservation: lands, place in trust status, report-----	20576
tribal land, sale and exchange of isolated tracts, report-----	9909
Rosebud Sioux Tribe, <i>see</i> Sioux Indians.	
Rosen, Alan, compendium of Explorer VI data-----	19889
Rosen, Howard, manpower development and training act, its meaning for young people and counselors-----	14440
Rosen, Seymour M., higher education in Poland, organization and administration-----	8189
Rosenberg, N. W., ionospheric winds, motions into night and sporadic E correlations-----	18167
Rosenberry, Paul E., commercial corn belt farms, 1962-----	8146
Rosenthal, Joseph, Federal support for medical and health-related research, 1947-64-----	19970
Roses for the home, classification, culture, etc-----	16738
Rosin, <i>see</i> Naval stores.	
Roslyn, Wash., coalbed, hydraulic mining research-----	18095
Rosa, A. John, mycobacteria in adult salmonid fishes returning to national fish hatcheries in Washington, Oregon, and California, 1958-59-----	19244
Ross, Jack S.: fish meal supply and price trends, supplement for 1962 to grain and feed statistics-----	8153
supplement for 1962 to grain and feed statistics-----	13188
Ross, Mark, speech discrimination of hearing-impaired individuals in noise, relationship to other audiometric parameters-----	14918
Ross, Reuben J., Ordovician graptolites of Basin Ranges-----	12224
Ross, Ronald G., directory of counselor educators-----	2151
Rosser, R. M., NS Savannah upgrading analog computer analysis-----	5924
Rossmann, Darwin L.: geology and petrology of 2 stocks of layered gabbro, Fairweather Range, Alaska-----	10279
geology of eastern part of Mount Fairweather quadrangle, Glacier Bay, Alaska-----	6547
Rosters, <i>see</i> names of departments, etc., issuing rosters.	
Rostow, W. W., theory, opinion of Japanese Communist Party-----	10514
Roswell Basin, saline ground water, 1958-59-----	8341
Rotarlu, George J., krypton-85 clathrate analytical techniques, to measure oxidation-reduction products in liquid state-----	18594
Rotary drills, <i>see</i> Drills (tools).	
ROTC, <i>see</i> Reserve Officers' Training Corps, Air Force-Reserve Officers' Training Corps, Army.	
Roterus, Victor: remarks-----	4433
Feb. 6, 1963-----	11527
May 28, 1963-----	11527

	Entry		Entry
Roth, Emanuel M., oxygen toxicity.....	18162	RT-TR series.....	18263
Roth, H. P., technical papers of 13th metallographic group meeting.....	4488	Rubber:	
Roth, Susanne, see Grün, Susanna.		industry reports.....	3511
Rothe, Victor E., crash injury evaluation, crew seat design criteria for Army aircraft.....	13099	sampling and testing, test method standard, change.....	538
Rothman, Stuart:		special purpose synthetic industries, water requirements.....	12231
address.....		supply and distribution for U.S.....	3574
Oct. 17, 1962.....	3181	current industrial reports.....	11627
Feb. 15, 1963.....	5629	summary for 1962.....	17584
Apr. 18, 1963.....	11113	synthetic, USSR industrial devel- opment, translations.....	
Rottfiers, nutrition, USSR study.....	10774	Rubber tracks, Army combat vehicles, unnecessary deterioration of unused stock, GAO review.....	6540
Rotor planes, see Helicopters.		Rubberweed, livestock poisoning in Western States, reducing losses.....	14856
Rotorcraft:		Rubin, Vera C., kinematic studies of early type stars.....	21022
airworthiness—		Rubinoff, Morris, UDOFTT mathe- matical procedures.....	7366
normal category, civil aeronau- tics manual.....	6390	Rudolf, Paul O.:	
normal category, civil air regu- lations, amdt.....	2245, 20657	botanical and commercial range of jack pine in Lake States.....	15562
transport categories, civil aero- nautics manual, supplement.....	475	1962 forest tree seed crop aver- ages fair in Lake States.....	12173
Rotors:		Ruggeri, Robert S., effects of air con- tent, etc., on liquid tension in incipient cavitation in ven- turi flow.....	9146
duct closure values for hot cycle system.....	14751	Rugs:	
helicopter, hovering characteristics of airfoil section.....	1307	current industrial reports.....	18685
jet-flat, helicopter, flutter charac- teristics in hovering and for- ward flight.....	14752	wilton, brussels, etc., Tariff Com- mission report.....	18347
turbine blades, small air-cooled, temperatures and coolant pres- sure losses for cascade.....	5528	Rula, A. A., environmental factors affecting ground mobility in Thailand.....	13888
Rouge River:		Rulers, see Rules (measures).	
channel improvement, engineer re- port.....		Rules, see names of courts, commis- sions, etc., issuing rules—also subjects.	
departmental edition.....	2200	Rules (measures):	
document edition.....	1980	desk ruler, wood, Federal stand- ard.....	20681
Rough-air effect on crew performance during simulated low-altitude high-speed surveillance mis- sion.....	16398	Rules and Administration Committee, Senate:	
Roughage, see Food for livestock.		calendar.....	3861
Rounds, Donald E.:		committee print.....	337
radioprotective agents, correlative study of RNA content and de- gree of radio-resistance of cells in vitro.....	9632	hearings.....	17334
radioprotective agents, effects of depolymerized yeast ribonu- cleic acid, etc.....	5888	investigations and studies—	
Rounsefell, George A., marking fish and invertebrates.....	10195	financial or business interests of former employees, etc., report.....	20600
Rous, W. C., zirconium 1.5 w/o niob- ium cladding, evaluation in boiling water reactor environ- ment.....	9677	privileges and elections, ex- penses, report.....	6268
Rowland, Catherine M., index to ap- propriation ledgers, Interior Dept., Finance Division, 1853- 1923.....	16416	reports.....	6238-70, 6273, 6275, 6278-79, 6281-84, 8046, 8076-86, 9084-86, 11958, 11989-90, 11992, 13698, 13763- 772, 15345, 15363-366, 17287- 291, 17297-299, 19010, 19022- 23, 20571, 20586, 20600-601.
Rowland, Robert L., statistics on pub- lic institutions for delinquent children, 1958.....	6015	Rules Committee, House:	
Rowley, James J., remarks, May 16, 1963.....	11358	hearings.....	17187
Roy, Douglas F., system for record- ing forest tree seed lot infor- mation in California.....	17486	reports.....	4734-38, 6103-14, 6160-61, 7945-49, 7961-63, 7965, 7970, 7972-74, 9868-69, 9892-93, 9895-96, 9915, 11800-801, 11812-813, 11817- 818, 11840, 11842-844, 13531, 13544, 13558-560, 13585-588, 13612-613, 13619-620, 15237- 238, 15253, 15263, 15270, 15277, 15280, 15292, 17116-118, 17132, 17134-136, 17150-153, 18856- 859, 18892, 18900, 18902, 20464, 20469, 20473-477, 20483-484.
Royal Blue Coaches, Inc., accident.....	2449	Rumania:	
Royalties:		Academy activities, proceedings, Mar. 18-21, 1963.....	10787
musical compositions on coin-oper- ated machines, provide, hear- ings.....	15321	Academy of Sciences betatron.....	8864
musical compositions on coin-oper- ated machines, provide, re- port.....	17141	Automation Commission of Acad- emy, scientific session.....	14128
Royce, R. K., high-frequency spiral antenna at Naval Radio Sta- tion, Cheltenham, Md.....	11184		
Royer, John H., jr., address, Sept. 27, 1963.....	18751		
RSFSR, see Russian Soviet Federated Socialist Republic.			

# INDEX 1963

	Entry		Entry
Rumania—Continued		Rural Areas Development Office, Ag-	
bibliographic guide.....	19812	riculture Dept., appropriations,	
biographic information—		1964, hearings.....	9921
C. D. Nenitescu.....	2492, 10623	Rural communities:	
V. L. Bologa.....	8951	areas, development—	
cultural relations, agreement.....	13085	articles.....	8226
East European legal journals, ab-		handbook, pegs for rural prog-	
stracts.....	7128, 8672, 17971	ress, financial and technical	
Forestry Research Institute, prog-		assistance.....	11449
ress in silviculture.....	20918	list of aids.....	1700
Institute of Applied Mechanics of		recreation enterprises for profit.....	18419
Rumanian Academy, research		attracting new industry.....	7656
activities.....	18010	civil defense—	
Institute of Inframicrobiology—		knowledge for survival, newslet-	
facilities and activities.....	2753	ter to extension program lead-	
objectives, etc.....	8822	ers.....	8227
study of viruses.....	8863	targets that might be bombed,	
legal journals, abstracts.....	857	fact sheet.....	10146
959, 10477, 12556, 14337, 19466		you can survive, fact sheets.....	10128-147
Marine Zoological Station of		Communist China, class struggle	
Agigea, activities, etc.....	10684	in rural areas (lectures).....	14426
medical care of neuropsychiatric		developing home grown industry.....	5904
patients, problems.....	14175	development, basic problems, new	
Parosena Thermoelectric Power		solutions (talk).....	14890
Plant achievements.....	18001	employment development program	
peaceful coexistence, basic princi-		for smaller communities.....	17407
ple of foreign policy, transla-		helping people to help themselves,	
tion.....	17800	overall economic development	
Piscicultural Research and Plan-		program.....	4352
ning Institute, activities, trans-		housing—	
lation.....	17908	census, 1960.....	13273
political impressions of traveller.....	14380	for senior citizens.....	6386
popular music, problems debated by		library service.....	1693
Music Council.....	8795	loans—	
provincial press, summaries.....	742	to associations of residents, for	
820, 982, 1015, 2571, 2622, 2745,		shifts in land use.....	470
2885, 5165, 5319, 5393, 6759,		to groups of farmers, etc., for	
6905, 6996, 7078, 8488, 8657,		improvements, general infor-	
8860, 10377, 10501, 10634,		mation.....	6387
10736, 10870, 12432, 12561-652,		population, recent trends.....	4803
12752, 14161, 14286, 14343,		program for strengthening rural	
15829, 15948, 16050, 16169,		America (addresses).....	1674-75
17707, 17776, 17946, 18002,		residents and urban expansion.....	20626
19434, 19475, 19753, 19693,		revitalizing rural America (ad-	
20832.....		resses).....	1676-77
science, engineering, and higher ed-		upswing in rural America.....	11469
ucation, recent statutes gov-		Rural development programs:	
erning.....	7127	aids, list.....	1700
science, progress in years of peo-		articles.....	8226
ple's rule.....	12399	basic problems, new solutions	
scientific and cultural cooperation		(talk).....	14890
agreement with Bulgaria.....	10656	conservation projects (address).....	7554
Ruminants, bloat, current research.....	8	loans to rural groups for improve-	
Rumsey, Charles B., heat-transfer		ments, general information.....	6387
measurements on flat-faced		new economic opportunity in rural	
conical nose.....	14535	America (address).....	1669
Runckel, Jack F., catalyst beds for		newsletter.....	4160
98-percent-concentration hy-		next step (address).....	1670
drogen peroxide.....	14558	pathways to rural progress, FAA	
Runoff:		programs.....	472
Cecil soil in southern Piedmont,		pegs for rural progress, handbook,	
control studies.....	7584	financial and technical assist-	
from impervious surfaces, numeri-		ance.....	11449
cal computations.....	19151	policies, and responsibility for seg-	
plot design and installation for soil		ments of projects (statement).....	1723
erosion studies.....	20263	RAD program to create new job op-	
runoff precipitation relation, statis-		portunities in rural communi-	
tics.....	607	ties (address).....	9558
semiarid rangelands, flumes for		resource development, challenge to	
measuring, field performance.....	9541	Extension Service (address).....	14888
Runways (aeronautics):		team approach to better land use	
combination foaming-tanker vehicle		(speech).....	14894
for fire fighting.....	18238	Rural electricity, <i>see</i> Electricity.	
roughness applicable to supersonic		Rural electrification, <i>see</i> Electricity.	
transports, effects of airplane		Rural Electrification Administration:	
and landing gear factors.....	1292	appropriations, 1964, Agriculture	
snow stabilization.....	19135	Dept., hearings.....	9921, 17302
vehicular measurements of effective		distribution line extension, con-	
friction.....	9456	struction contract.....	3313
Ruppel, Edward T., geology of Basin		lending agency of USDA.....	9585
quadrangle, Mont.....	20729	materials acceptable on REA sys-	
		tems.....	11258, 16553
		supplements.....	3869-70, 5713
		progress, role in rural America,	
		etc. (address).....	5813, 13038

# JANUARY-DECEMBER

	Entry		Entry
Rural Electrification Administration—		Rusk, Dean :	
Continued		addresses—	
REA borrowers, telephone systems,		Feb. 13, 1963.....	9402
list of materials acceptable.....	11258	Feb. 22, 1963.....	9403
REA bulletins.....	3314,	Feb. 26, 1963.....	9404
5712, 9374, 14684, 21102		May 17, 1963.....	11299
REA pattern.....	9374	changing patterns in world affairs	
report, 1962.....	13037	(interview).....	1511
statistical bulletins, monthly.....	3925-26	Ruskin, R. E., research use of instru-	
statistical report, 1961.....	5711, 7421	mented drones, in cloud phys-	
telephone system, construction con-		ics and meteorology.....	21057
tract, addendum.....	7420	Russel, R. B., X-ray preferred orienta-	
Rural fringe and urban expansion.....	19089	tion meeting, West Concord,	
Rural life, see Country life—Rural		Mass., Dec. 7-8, 1961, papers.....	16850
communities.		Russell, J. L., jr. :	
Rural mail carriers, see Mail carriers.		absorber burn-up experiment.....	9673
Rural recreation, new opportunities		thermal neutron diffusion length	
on private land.....	11463	measurements in light water.....	9674
Rural redevelopment :		Russell, Maud, testimony.....	13672
agriculture yearbook 1963—		Russell, R. B., beta treatment of ura-	
departmental edition.....	20291	nium.....	18583
document edition.....	20452	Russell County, Kans., Hall-Gurney	
area and economic growth under		oilfield, petroleum engineering	
ARA (remarks).....	1788	study.....	5476
area resource development.....	10123	Russia, see Union of Soviet Socialist	
outdoor recreation, field of opportu-		Republics.	
nity.....	12244	Russian accessions, L.C. monthly in-	
recreation enterprises for profit.....	18419	dex.....	3913
special area development services		Russian language :	
available, rural areas develop-		algorithm for machine translation	
ment handbook.....	11449	from Russian to Lithuanian.....	14341
special forest products for profit,		guide, Air Force pamphlets.....	55,
self-help suggestions.....	18420	4387, 14906	
statistical profiles, 5B area—		machine translation from French	
Alabama.....	15128	to Russian, USSR study.....	12721
Alaska.....	15131, 15137	motor-transport and related terms,	
Arizona.....	13364	glossary.....	12690
Arkansas.....	13363	serials, translated into English and	
California.....	11694, 15129	other western languages, list.....	1191
Colorado.....	13356-357	Russian River :	
Delaware.....	13377	flood control, engineer report—	
Florida.....	11692, 15127	departmental edition.....	3221
Georgia.....	13360-361	document edition.....	1990
Idaho.....	13359	Russian Soviet Federated Socialist	
Illinois.....	15126	Republic :	
Indiana.....	11695	Ministry of Health, Presidium of	
Kentucky.....	11691, 13358	Scientific Council of Health,	
Louisiana.....	13353	actions taken, etc.....	2461
Maine.....	13369	physiologists conference.....	5268
Maryland.....	9790	Russian wild-rye, see Ryegrass.	
Michigan.....	15130	Russo, Anthony J., jr., attenuation	
Minnesota.....	15125	and reflection of telemetering	
Mississippi.....	13370	signals by ionized flow fields	
Missouri.....	13368	surrounding reentry bodies.....	16378
Montana.....	11690	Russo, F., PM research and develop-	
New Hampshire.....	11698, 13376	ment task 1.0, core 2 final de-	
New York State.....	13355	sign report.....	18580
North Carolina.....	11697	Rusts (plant diseases), see Gall rust—	
North Dakota.....	15134	White pine blister rust.	
Ohio.....	9789	Ruud, F. O., stress analysis of hy-	
Oklahoma.....	13366	draulic turbine parts.....	5706
Puerto Rico.....	15132	Rwanda, import tariff system.....	6599
South Carolina.....	13371	Ryack, Bernard L., natural pilot flight	
Tennessee.....	13372-373	proficiency evaluation model.....	18226
Texas.....	13374-375	Ryan, Denis, relief.....	13679
Utah.....	11693, 13362	Ryan, J. P. :	
Vermont.....	11699, 15133	gold.....	19833
Virginia.....	11696, 13367	platinum-group metals.....	18090
West Virginia.....	13354	silver.....	19878
Wyoming.....	13365	Ryan, Robert H., restaurants and	
Rural rehabilitation, goals, Agricul-		other eating places.....	3324
ture Department's role (ad-		Ryazan, Russian RSFR, general infor-	
dress).....	1673	mation.....	12695
Rusaleum, Herbert, vocational rehabili-		Rybnoye khozyaystvo (periodical) :	
tation of older handicapped		translations -- 9006, 12652, 12722, 14209	
workers.....	13112	Rye :	
Rush, E. S., trafficability of soils, 17th		crop production, 1962.....	7459
supp., tests on coarse-grained		futures—	
soils with self-propelled and		commitments of traders.....	3530
towed vehicles, 1958-61.....	13884	trading and open contracts.....	3752
Rush, John D., liability and insurance		Ryegrass, growing Russian wildrye	
protection for farmers who		in Western States.....	18430
have income-producing recrea-		Ryer, C. M., powder fuel processing	
tional facilities.....	15418	by 2-pass swaging.....	1830

Do not order from index; see indicated entry

Page 535

# INDEX 1963

	Entry
Rygg, G. L., biphenyl control of lemon spoilage, etc.	1704
Ryker, Russell A., methods and costs of killing hardwood culls.	4979, 8291
Ryukyu Islands:	
agricultural commodities, agreement	13073, 14727
foreign operations appropriations, 1964, hearings	18918
<b>S</b>	
S.A.M., <i>see</i> School of Aerospace Medicine.	
S.B.A., <i>see</i> Small Business Administration.	
S.C.S., <i>see</i> Soil Conservation Service.	
S.D. series	4162
S.E.C., <i>see</i> Securities and Exchange Commission.	
S.R. series	4163
Sabatini, Annunziata, relief	11783, 17222
Sabatini, Omero, basic data on economy of Republic of Ivory Coast	6608
Sabbatical leave, <i>see</i> Leave of absence.	
Sabine National Wildlife Refuge, birds	10197
Sabine-Neches Waterway:	
navigation improvement, engineer report—	
departmental edition	2222
document edition	1993
Sabo, Julius J., radionuclides in estuarine, etc., environments, symposium	12990
Sacramento, Calif., electric facilities of area, map	520, 2266
Sacramento National Wildlife Refuge, general information	4958
Sacramento River and Valley:	
chemical quality of surface waters in basin	12236
tide-affected streams, discharge measurements, empirical method of determining	15617
Sadacca, Robert, human factors problems in image interpretation task, status report	16830
Sadoff, Melvin, study of pilot's ability to control during simulated stability augmentation system failures	1312
Saenger, Eugene L., medical aspects of radiation accidents, handbook for physicians, health physicists, and industrial hygienists	11589
Safe and sanitary home refuse storage	7412
Safe Harbor, Pa., electric facilities of area, map	516, 2266
Safety and service agents, examination announcement	7791
Safety and Service Bureau, Railroad Safety Section, report, 1962	2452
Safety at sea, <i>see</i> Safety of life.	
Safety belts, <i>see</i> Automobile seat belts.	
Safety-checking livestock trucking to reduce loss and damage	8206
Safety equipment and appliances, Federal item identification guides for supply cataloging, supplements	3654
Safety in the air, <i>see</i> Safety of life.	
Safety inspectors, examination announcement	7792

	Entry
Safety of life:	
air safety—	
aerospace maintenance safety	7603
aerospace nuclear safety (remarks)	18602
aerospace safety (periodical)	3422
airborne collision prevention devices, symposium	9457
aircraft accident prevention (series)	16921
Army aviation accident prevention pamphlet	9658
naval aviation safety review	3460
personnel restraint systems study	11349
rules of CAB pertaining to accidents, hazards, investigations	6017
Atlantic merchant vessel report system	11076
Atomic Energy Commission shipments of radioactive material, summary of incidents, 1957-61	139
atomic energy program—	
biological effects of fallout and radiation protection guide (paper)	1401
reactor safety, literature search	131, 18587
atomic ships, dosimetric control	2530
atomic weapons accident hazards, precautions and procedures, technical information bulletin	7720
BPA Technical Laboratory manual	13255
buildings, dangerous or unsafe, removal, District of Columbia, amend act, report	18899
Bureau of Safety pamphlet BOSP series	16921
comparison of State codes with ASA, charts—	
laundry machinery and operations	9038
power presses	3018
trucks, powered industrial	10887
window cleaning	16269
electric supply and communication lines, safety rules for installation and maintenance, errata	9202
electrical shock, much-misunderstood hazard	9039
epoxy resins, hazards, preventive measures	18289
experimental gas-cooled reactor, final hazards, summary report	16852
explosive ordnance disposal, technical manual	113
FAA, construction and alteration work handbook	6393
fallout and your farm food	4368
families on guard against accidents	20095
farmwork—	
safety, and you, discussion for youth leaders, teachers, etc.	5433
safety tips	20925
films and film strips, Federal, list	15508
final off-site radiological safety report, Project Sedan	11569
fire emergency plan for farms	14896
fire safety, nursing homes	13006
first aid guide for USDA employees	18415
fishermen, captains, and owners of New England fishing vessels, safety suggestions and practices	4942
gas explosion hazards associated with bulk storage of molten sulfur	7221
glass door accidents, health departments survey in 16 communities, Jan.-June, 1963	21084



# JANUARY-DECEMBER

	Entry
Safety of life—Continued	
Industrial safety—	
fundamentals of accident prevention	3016
Industrial safe practices, maintenance and safety	1156
mechanical and physical hazards (series)	1156, 5432, 12780
organization and administration (series)	3016, 12779
static electricity, detection, control, etc.	12780
using injury statistics	12779
judging hazard from native trees in California recreational areas, guide for professional foresters	15583
laboratory, pilot plant, and production operations, with explosives, propellants, and pyrotechnics	1373
licensing of power reactors	16862
management safety policy statements, guide	4928
maritime safety data for stevedoring	14449
maritime safety digest	3884
maritime statistics, base for accident prevention	9041
medical self-help training for you and your community	21089
mine safety—	
ammonium nitrate blasting agents, recommendations	12830
coal mines—	
escapeways and other emergency measures	1202
Federal coal-mine safety act administration, 1952-62	19838
Federal safety act and codes, interpretations and applications	9111
float dust deposits in return airways in American coal mines	7208
mining injury experience, analysis, 1960	1207
metal and nonmetal mining industries, safety organization and activities of award-winning companies	18076
mobile diesel-powered equipment approved by Mines Bureau	18074
national safety competition, 1961	7209
motor vehicles, Govt. passenger carrying, establish standards, report	13592
N.S. Savannah safety assessment	18596
National Accident Prevention Center, hearings	9939
National Farm Safety Week	7579
nuclear safety, review of recent developments	3977
occupational safety publications, list	18028
on-site radiological safety report, Project Sedan	11570
protection against fallout radiation in simple structures	16861
protection from accidental injury from misuse of petroleum products, how to comply with Federal hazardous substances labeling act	6473
protection from pesticide residues, facts for consumers	20691
public swimming pools, suggested ordinance and regulations	18294

	Entry
Safety of life—Continued	
radiation—	
accidents, medical aspects, handbook for physicians, health physicists and industrial hygienists	11589
safety and control manual	1837
safety for civil airports	14929
radioactive materials, safety work rules	4475
radiography license applications, guide	14951
refrigerator entrapment prevention, safety guide	6441
rural fire defense preparation for survival	4370
safe practices and guides, recommended standards, Federal Safety Council digest	17439
safety and fire protection bulletin, VA	9476, 20220
safety and special radio services, FCC applications and actions	3646
safety digest	4442, 13235, 16822, 20321
safety investigation regulations, SIR series	6017
safety of public at Federal installations (address)	4929
safety record	4164
safety review	4165
safety standards	4166
SL-1 nuclear reactor accident, National Reactor Testing Station, final report	5935
supervisors development program, basic course	4449
survival of extreme vertical impact in seated position	4504
traffic safety—	
Federal Government and highway safety (remarks)	20116
highway safety action program, research	16542
highway traffic safety, bibliography	7413
nationwide situation (remarks), services, national organizations, directory	20119
transportation rules, railway service, Army pamphlet	16543
USSR translations	5915
water program, Operation Waterproof 4th grade, general information	10769
water supply and plumbing cross-connections, hazards	16515
Yugoslav regulations, etc., on nuclear affairs	14678
Safety pins, Tariff Commission report	646
Safferman, Robert S., isolation, etc., of actinomycetes related to water supplies	3377
Saffman, Sadie, program trends in crippling conditions, 1950-60	16532
Safflower, diseases, descriptions, etc.	1929
Sagamore Hill National Historic Site, acceptance of deed (remarks)	11435
Sagen, Louise, convalescence after surgery	14055
Saginaw River: navigation improvement, engineer report	14676
departmental edition	2201
document edition	1988
Saguaro National Monument, general information	5643
Sahara: evolution of Saharan peoples, translations	7112
Morocco-Spanish Sahara boundary, study	20154

# INDEX 1963

Entry	Entry
Saigon, Vietnam, water supply system, development, loan for construction by Development Loan Fund, GAO review.....	17510
Sailfish, ecological forms, distribution in northern Pacific Ocean, USSR study.....	5311
Sailing directions, world ports, index.....	18217
see also names of localities.	
Sailors:	
civil relief act, amend, hearing.....	8126
labor legislation, amend merchant marine act, hearings, 9942-43, licensing, etc., merchant marine personnel, rules and regulations.....	15323
premium pay.....	18745
wages, hours of work on board ship, and manning, recommendations of ILO convention, text.....	16315
Saimiri sciureus, see Monkeys.	20526
Sainsbury, C. L., beryllium deposits in Seward Peninsula, Alaska.....	19306
St. Clair, Hillary W., thermochemical model for iron blast furnace.....	10965
St. Clair County, Ill.:	
Richland Creek, engineer report—departmental edition.....	454
document edition.....	268
St. Croix River, Maine to Little River, N.C., light list.....	4640
St. Elizabeths Hospital, D.C.:	
commitment of persons of unsound mind found on Federal reservations in Loudoun County, Va., report.....	13065
mental health followup project, report.....	12040
Saint-Gaudens National Historic Site, establish, report.....	18863
St. George, R. A.:	
protecting log cabins, rustic work and unseasoned wood from injurious insects in eastern United States.....	1692
subterranean termites, their prevention and control in buildings.....	16739
Saint-Jean, Bernard J., solar cell generator on satellite.....	18150
Saint John River:	
upper, hydroelectric power development, report by study committee.....	15633
summary.....	15634
St. Johnsbury, Vt., District Court term to be held, report.....	9969
St. Lawrence County, N.Y., magnetic district, northwest Adirondacks, regional geology.....	2348
St. Lawrence Gulf, sailing directions, change.....	11137
St. Lawrence River and Valley:	
pilotage services, agreement with Canada.....	11320
sailing directions, change.....	11137
seaway—	
changing shipping patterns, with emphasis on U.S. grain exports.....	14873
Lake States wood-product imports and exports.....	6511
navigation all year, study, reports.....	13707, 18909
traffic report, 1962.....	11260
St. Lawrence Seaway, see St. Lawrence River and Valley.	
St. Lawrence Seaway Development Corporation:	
appropriations, 1964, hearings.....	17162
audit reports, 1961.....	6530, 7861
press releases.....	4091
report, 1962—	
departmental edition.....	13039
document edition.....	11764
St. Lawrence Seaway Development Corporation—Continued	
traffic report of St. Lawrence Seaway, 1962.....	11260
St. Louis, Mo.:	
civil rights, public schools, 1962....	181
consumer expenditures and income, advance report.....	7159, 17285
electric facilities of area, map.....	518, 2266
Lambert Field, weather observations, hourly, decennial census.....	9498
metropolitan centers, outdoor recreation, present and future.....	3248
occupational wage survey—	
departmental edition.....	5444
document edition.....	4700
Wherry housing units, renovate, hearing.....	11885
St. Louis-San Francisco Ry., accident.....	14079
St. Louis Southwestern Ry., accident.....	8434
St. Marys County, Md., land conveyance to Lexington Park Volunteer Fire Department, Inc.....	18889
Saint-Paul, Raymond C., NDC-Fortran program for unit cell nuclear design calculations for rod clustered pressure-tube lattices.....	16834
St. Paul, Minn.:	
electric facilities of area, map.....	518, 2266
income, education, and unemployment in neighborhoods.....	5457
International Airport, weather observations, hourly decennial census.....	9496
lands conveyed to, release reservations, report.....	13608
occupational wage survey—	
departmental edition.....	10901
document edition.....	9822
sand and gravel operations and costs in area.....	10936
St. Petersburg, Fla., wholesale fruit and vegetable markets, organization.....	7574
Salipan, rocks, relationship of volcanic rocks of Guam.....	15611
Salad dressing:	
and related products, 1962.....	16871
current industrial reports.....	11628
definitions and standards of identity, amendments.....	12143-144
Salaries:	
dental personnel in State health departments, 1962.....	9354
District of Columbia, public school educational employees, increase partial pay, report.....	18895
dual compensation-dual employment laws, modernize, hearings.....	17181
Federal agencies, principles and procedures, GAO guidance manual.....	585, 19278
Government officials and employees—	
adjust rates of basic compensation, hearings.....	18957, 20502
annual report on statutory pay systems, message from the President.....	9839
back pay act of 1963—	
hearing.....	11911
report.....	11802
bimonthly statistics.....	3414
classification laws, compilation.....	210
Federal personnel manual supplement.....	20383
hazardous duty pay, amend classification act—	
hearing.....	8008
report.....	7950

# JANUARY-DECEMBER

	Entry		Entry
<b>Salaries—Continued</b>		<b>Salesmen and salesmanship:</b>	
Government officials and employees—Continued		color can stimulate sales.....	1490
premium pay in lieu of pay at saved rates—		selling around world, how Commerce helps.....	7810
hearing.....	15326	selling to military, general information.....	19086
report.....	15264	training retail salespeople, bibliography.....	14689
rate for positions under general schedule, amendment.....	189	<b>Salespeople, see Salesmen and salesmanship.</b>	
summary analysis of President's proposal for reform of Federal statutory salary systems.....	13066	Salicylanilides, and monohaloid salicylanilides dichloriodic derivatives, new synthetic antimicrobial substances.....	977
land-grant colleges and State universities, 1962-63.....	13862	Saline water, <i>see</i> Water.	
occupations by earnings and education, by color.....	15084	Saline Water Conversion Conference, proceedings, 1962.....	6576
personnel in land-grant institutions, half-century changes.....	368	Saline Water Office:	
position and pay management, supervisor development program, basic course.....	5909	press releases.....	4092
postal service employees, personnel handbook.....	4023	report, 1962.....	12245
professional, administrative, technical, and clerical, national survey—		sound water conservation (remarks).....	10313
1961-62—		<b>Salinity:</b>	
departmental edition.....	9060	Delaware estuary.....	611
document edition.....	7843	influence on characteristics of aquatic fauna composition, USSR study.....	17749
Feb.-Mar. 1963.....	20930	<b>Salisbury Beach, Mass.:</b>	
railroads, officers, directors, etc.....	19365	beach erosion control study, engineer report—	
salary trends, firemen and policemen, 1924-61.....	1162	departmental edition.....	459
scientists, national register, 1962.....	3196	document edition.....	251
State salary ranges of positions in employment security, etc.....	616, 10305, 19340	Salish Indians, <i>see</i> Flathead Indians.	
Supreme Court clerk, payment by marshal, report.....	17115	Saliva, whole and parotid, lipid constituents.....	81
teachers, merit programs.....	2164	Sallas, Gustav, labor law and practice in Iraq.....	9046
VA medical installations directors, additional pay, report.....	6146	Sallows, E., hot cycle rotor duct closure valve system.....	14751
women, equal pay, economic indicators.....	7519	<b>Salmon:</b>	
<i>see also</i> Wages.		catches in monofilament and multi-filament gill nets, comparison.....	15520
Salem, Mass., Narbonne House, acquisition, report.....	13554	chum—	
Salem, Oreg., McNary Field, weather observations, hourly, decennial census.....	21173	length, age, etc., in Alaska Peninsula, Kodiak Island and Prince William Sound areas.....	8280
Salem National Historic Site, administer 17th-century Narbonne House, acquisition, report.....	13554	resources of Alaska from Bristol Bay to Point Hope.....	4970
<b>Sales:</b>		development program in California, initiate, hearings.....	299
Agricultural Stabilization and Conservation Service, reports.....	4122, 4169	escapements in turbid streams, evaluation of fyke trapping as means of indexing.....	6466
department stores—		fall chinook, returns to hatcheries, Bonneville Dam pool area, 1945-60.....	6468
annual distribution by months.....	10177	fry, pink, and chum, estimating abundance in Prince William Sound, 1957.....	2300
distribution by departments.....	10178	king, Cook Inlet, Alaska, inventory study.....	13974
indexes, without seasonal adjustment, monthly.....	10171-172	Pacific, conservation measures, limit importation from countries not observing, hearings.....	299
monthly reports.....	3910-11	spawning rifle—	
selected cities and areas, weekly percentage changes.....	4297	in southeastern Alaska, water-flow through.....	6463
stocks-sales ratios.....	10175-176	interchange of stream and intragravel water.....	4969
weekly index.....	4296	stream catalog of southeastern Alaska regulatory district no. 2.....	13976
farm debt as related to value of sales.....	6437	<b>Salmonella:</b>	
Government directory.....	1493	infected mice exposed to acute cold, source of secondary invading staphylococci.....	14909
large corporations.....	4168	infection in mice maintained in the cold, virulence as factor.....	18467
profitable, U.S. trade centers overseas.....	13351	organisms, procedure for isolation from animal feeds and meat by-products.....	1643
water and sewer bond, 1962.....	11248		
<i>see also</i> names of commodities, etc.			
<b>Sales Association, Equity Cooperative Livestock, <i>see</i> Equity Cooperative Livestock Sales Association.</b>			
<b>Sales finance companies, <i>see</i> Finance companies.</b>			

# INDEX 1963

Entry	
Salmonella—Continued	
Salmonidae, mycobacteria in adult salmonid fishes returning to West Coast hatcheries.....	19244
Salmons, Ruth M.: school lunches, 1952-61, list of selected references.....	5617
veterinary medical periodicals currently received in National Agricultural Library.....	11093
Salt: minerals yearbook chapter.....	19876
molten, reaction rate of titanium and titanium subchlorides in... particle motion near nuclear detonation in halite.....	5489
thermoluminescent spectra of sodium chloride and hydroxide-free sodium chloride irradiated with 40-Mev alpha particles...	18585
Salt Lake City, Utah: Municipal Airport, weather observations, hourly, decennial census.....	9187
occupational wage survey—departmental edition.....	11404
document edition.....	9055
Salt Plains National Wildlife Refuge, mammals.....	7838
Salt River: flood control, etc., engineer report—departmental edition.....	4966
document edition.....	460
water supply outlook and snow surveys.....	245
Salt water, <i>see</i> Sea water.	4284
Salton Sea National Wildlife Refuge, birds.....	6460
Salts: balance and leaching requirement in irrigated lands.....	13192
fused-salt electrolysis of tungsten, experiments.....	5481
molten, selected references.....	18589
Saltzman, Edwin J., in-flight gains realized by modifying twin side-inlet induction system.....	10978
Salvador: agricultural trade, agreement.....	14717
alliance for progress programs, report on study mission.....	8023
print as Senate document, report.....	20571
Army mission agreement.....	14726
foraminiferal fauna collected off coast.....	12230
foreign trade regulations.....	15650
gas appliances, household and commercial, U.S. market.....	18614
health and sanitation, cooperative program, agreement.....	11327
shrimp fisheries, survey.....	2292
Salvage, records damaged by fire and water.....	10272
Salvelinus alpinus, <i>see</i> Trout.	
Salversville North quadrangle, Ky., geology and coal resources.....	10274
SAM, <i>see</i> School of Aerospace Medicine.	
SAM contourator, model B instrument for measuring changes of surface contours.....	74
Sam Rayburn Dam and Reservoir: designate—law.....	17053
reports.....	15242, 17255
Samarium oxide: high temperature spectral emissivity.....	14987
thermal expansion.....	7217
Samoa, <i>see</i> American Samoa.	
Samore, Theodore, library statistics of colleges and universities, 1961-62, institutional data.....	12066

Entry	
Sample questions and directions.....	4830
Sampling: churn-drill and diamond-drill data from San Manuel copper mine, Ariz., statistical analysis.....	18093
forest, elementary methods.....	1681
Lynch Creek beryllium-tungsten prospect, Lander County, Nev., method used for study of marine microflora, problems, USSR... methods for determining insect populations in stored grain... procedures and tables for inspection by attributes, military standard.....	1252
procedures and tables for life and reliability testing based on Weibull distribution, reliable life criterion.....	20881
seed offered for importation under Federal seed act, guide to U.S. customs inspectors.....	7534
tables describing small-sample properties of mean, median, standard deviation and other statistics in sampling from various distributions.....	17349
<i>see also</i> names of substances or objects sampled.	8142
Sampling devices, pumping samples with alternate suspended-sediment handling systems investigation.....	13149
Sampson, J. B., activation measurements of Th-232 resonance captures in Peach Bottom HTGR critical assembly.....	14601
Samson, J. A. R.: absolute intensity measurements in vacuum ultraviolet.....	7689
absorption, etc., coefficients of propylene and butene-1 in vacuum ultraviolet.....	18121
duoplasmatron as vacuum ultraviolet light source.....	19898
vacuum ultraviolet light sources.....	19896
Samsonov, G. V.: borides of rare earth metals.....	19897
boron, its compounds and alloys.....	119
San Andres National Wildlife Refuge, mammals.....	118
San Antonio, Tex.: income, education, and unemployment in neighborhoods.....	4963
occupational wage survey—departmental edition.....	10919
document edition.....	18033
Sanatoriums, and health resorts, role in treatment of eye diseases, conference, USSR report.....	17060
San Bernardino, Calif.: electric facilities of area, map... occupational wage survey—departmental edition.....	19728
document edition.....	520, 2266
San Bernardino County, Calif.: public lands at Mojave B Aerial Gunnery Range, withdrawal—law.....	5438
reports.....	4694
Sanchez, George I., development of education in Venezuela.....	20442
Sanchez, Juana B., relief.....	9879, 19027
Sand: beaches—Bristol Bay, Alaska, reconnaissance.....	10065
equilibrium characteristics in offshore zone, errata.....	11784
casting machinery, effectiveness of model II Michigan sand caster for forest fire control.....	13987

# JANUARY-DECEMBER

	Entry		Entry
Sand—Continued		San Francisco, Calif.—Continued	
coarse-grained soils, tests with self-propelled and towed vehicles, 1958-61	13884	occupational wage survey—	
control, research, Communist China	17880	departmental edition	10898
desert lands	14395	document edition	9819
industry, injury experience, 1960	9115	relocation of elderly people, hearings	6287
minerals yearbook chapter	19877	see also Federal Reserve Bank of San Francisco	
operations and costs, Minneapolis-St. Paul area, Minn.	10936	San Gabriel Mountains:	
Sand dunes, see Dunes		anorthosite, recovery of alumina by lime soda sinter process	18102
Sandberg, Arthur M., world trade of interest to fishery industries	547	geology	18102
Sander, D. H., growth curves for ponderosa pine in Nebraska windbreaks	4989	San Gabriel River:	
Sandercock, Donald M., cavitation and noncavitation performance of 80.6° flat-plate helical inducer at 3 rotational speeds	1281	beach erosion control study, engineer report—	
Sanders, William A., compatibility of molten uranium dioxide with 5 refractory materials	5572	departmental edition	4869
Sander Creek:		document edition	4693
flood control, engineer report—		watershed improvement, engineer report—	
departmental edition	8197	departmental edition	4870
document edition	7860	document edition	4692
Sanderson, Rudolph, relief	17098	Sangston, H. Earl, suggested management guides, practical guide for large companies and others who are interested in helping small businessmen improve his management skills	1492
Sandia Corporation, purchase orders under contract with AEC, GAO review	6538	Sanjos, Despina J., relief	17236
San Diego, Calif.:		Sanitariums, health manpower source book	12995
income, education, and unemployment in neighborhoods	9075	Sanitary engineering, advanced waste treatment research program, summary report	16531
occupational wage survey—		Sanitary engineers, conference, 1962, report of proceedings	1430
departmental edition	7161	Sanitation:	
document edition	6072	cooperative program, agreement with, El Salvador	11327
saline water conversion demonstration plant	2369	education work at new stage, USSR translation	19711
San Dimas Experimental Forest, general information	20711	equipment, Federal item identification guides for supply cataloging, supplements	3655
Sandoval County, N. Mex., Valle Grande and Valle Toledo, geology and hydrology	19325	facilities for migratory farm workers—	
Sandstone:		hearings	4789, 10021
Beacon, of Antarctica, type section, chemical composition, geochemistry data	2350	report	11969
Paleozoic, from borings in Florida, petrography	15613	low-cost systems for fallout shelters, investigation	19141
physical properties and clay mineral contents affecting susceptibility of oil sands to water damage, Powder River Basin, Wyo.	1233	milk—	
used as dimension stone	16324	amend Public Health Service act, hearings	2053
Sandusky River:		honor roll for 1960-62	1411
engineer report—		publications, price list	14654
departmental edition	461	shellfish—	
document edition	321	growing areas, manual	3277
Sandven, John, educational research in Norway	15430	harvesting and processing, manual	1403
Sandwich construction, see Beams—Disks—Ordnance—Panels (aircraft).		processing for shipment, agreement with Japan	3355
Sandy Hook to Cape Henry, coast pilot, supplement	6036	sugarcane and sugarcane, problems and remedial procedures, etc.	18404
Sanford, F. Bruce:		translations from Gdlyena i sanitariya	835, 2574, 5141, 8851
bibliography of publications of Branch of Technology	15523	vessels in operation, handbook	20096
Gulf States shrimp canning industry	13960	see also Refuse	
San Francisco, Calif.:		Sanitoriums, see Tuberculosis	
aircraft accident	20369	San Jose, Calif., health survey, methodology	13024
consumer expenditures and income, 1960	7147-48	San Juan, P.R.:	
electric facilities of area, map	520, 2266	beach erosion control study, engineer report—	
fruit and vegetable marketing facilities	20281	departmental edition	2223
income, education, and unemployment in neighborhoods	9076	document edition	2003
		census of housing, 1960, metropolitan housing, tenure, rooms, condition and plumbing, etc.	15081, 18646
		Income, education, and unemployment in neighborhoods	10920
		San Juan-Chama project, Cochiti Reservoir, make water available for pool for recreation, report	11997



# INDEX 1963

Entry	Entry
San Juan County, Colo. : geology and ore deposits, South Silverton mining area..... 8337	Saprolite : ores, Nelson and Amherst Counties, Va..... 1234
South Silverton mining area (se- ries)..... 8337, 10287	Virginia ores, flotation of ilmenite..... 5498
San Juan County, Utah, geology, ore deposits, and exploratory drill- ing..... 12223	Saprophytes, USSR research on sap- rophytic cultures..... 14085
San Juan County, Wash., soil survey..... 1503	Sapstreak, disease of sugar maple, status in Lake States..... 12175
San Juan Magnetic Observatory, mag- netograms and hourly values..... 4634, 15118	Saraniti, Maria N. (Sister Laura) : relief..... 11028
San Luis Obispo, Calif. : harbor improvement, Port San Luis, engineer report— departmental edition..... 19147 document edition..... 18804	Saratoga Springs, N.Y., climatic sum- maries of resort areas..... 14774
San Manuel Copper Corp., Pinal County, Ariz., mining, milling, smelting methods, errata..... 3053	Sarawak, Peace Corps program, agree- ment..... 3351
San Manuel copper mine, churn-drill and diamond-drill sample data, statistical analysis..... 18093	Sass, A. R., magnetic field of finite helical solenoid..... 19937
San Manuel Mine, Pinal County, Ariz., surface subsidence, meas- urements..... 9131	Sassani, Abul H. K. : bibliography of books and pam- phlets on education in India..... 8182 education in Iran..... 8163 educational data..... 6329 Kingdom of Greece..... 8166 Lebanon..... 8168 Saudi Arabia..... 15428 Sudan..... 8170 United Arab Republic..... 3110
San Miguel County, Colo., Frenchy Incline uranium deposit, re- gional study..... 15605	Satellites : Alouette, Canada's 1st satellite..... 9617 ANNA-1 optical beacon, evolution..... 18149
San Nicolas Island : geology..... 14021 hydrogeologic reconnaissance..... 6562	Ariel I, evolution of its structure..... 12315 artificial earth, generalized prob- lem of 2 fixed centers and its application, USSR study..... 12868
San Pedro de Atascama, Chile, ura- nium reconnaissance in area..... 16855	artificial lunar, modification of Hansen's theory for motion..... 5604
San Pedro River, water regimen of inner valley, pilot study..... 15620	astronomical observatory, orienta- tion and control..... 3125
Sanpete County, Utah, watershed project, hearing..... 13822	atmosphere as part of space envi- ronment..... 19930
San Simon Basin, Ariz., hydrologic data available, analysis and evaluation..... 10299	attitude control system using in- ertia wheels and magnets, sim- ulator study..... 19887
Santa Ana National Wildlife Refuge, mammals..... 17459	automated spacecraft of United States..... 1323
Santa Barbara, Calif. : harbor improvement, engineer re- port— departmental edition..... 2224 document edition..... 1983	automatic system for control of terminal phase of rendezvous..... 12885
Santa Barbara County, Calif. : geology and ground-water features of Point Arguello Naval Mis- sile Facility..... 6565	camera observations, tesseral har- monics of gravitational field and geodetic shifts derived..... 13669
water levels in observation wells..... 19320	chronology for 1962..... 19914
Santa Fe, N. Mex. : geology and water resources of area..... 19321	cloud interpretation from wide- angle pictures..... 14900
geophysical exploration of area..... 19321	communications— act of 1962, activities, report..... 4722, 18883
Santa Fe River, watershed, water yield, study..... 10240	address..... 18115 commercial system (paper)..... 10116
Santa Monica, Calif., wind distribu- tions as function of altitude..... 5588	FFC rules and regulations..... 4887, 8224
Santamour, Frank S., jr., variation in resistance of hard pines to mouse damage..... 10236	incorporators of Communications Satellite Corporation, nomi- nate, hearings..... 8088, 8100
Santo, John, Communist in workers' paradise, consultation..... 8013	intercontinental testing, agree- ment with— Italy..... 3359 Japan..... 3360
Santoli, P. A., molybdenum alloy ex- trusion development program..... 5870	military, program, hearings..... 11904
Santowax OMP : irradiation in M.I.T. in-pile loop re- actor— design equipment, etc..... 4483 summary..... 4482	networks, etc..... 5611 passive, with Lambertian sur- faces..... 18144
São Paulo, Brazil, algae and water supplies of area, study re- port..... 16528	technical progress report, hear- ings..... 8097
Saponins : alfalfa, content as related to loca- tion, etc..... 11434	communications systems, mutual interference with surface sys- tems..... 16421
fed rats, plasma and liver lipids, fecal bile acid and sterol ex- cretion..... 11549	critical inclination problem in orbit theory..... 7302 density measurements..... 11480
	detection, symmetry pattern recog- nition system 2..... 18228
	determining dimension of reference ellipsoid and geodetic datum, Czechoslovak study..... 7057

# JANUARY-DECEMBER

	Entry
Satellites—Continued	
drag determinations for artificial satellites	18310
earth-oriented, control problems	14554
earth reflected solar radiation incident upon arbitrarily oriented spinning flat-plate	14569
earth, thermal-vacuum testing at Goddard Space Flight Center	16372
Echo A-12, application vertical tests AVT-1 and AVT-2 flight shock and vibration data	19923
error analysis of naval space surveillance system	18229
Explorer VI and Pioneer V, data	19889
Explorer VI, data	19889
Explorer, space weather investigators	3109
Explorer VII (1959 Iota), micro-meteorite penetration experiment	9180
Explorer XII—	
instrumentation for study of energy spectrum of cosmic rays, silver-cadmium sealed battery, feasibility of using in space exploration	12856
solar radiation pressure effect on spin	3145
Explorer XVI, micrometeoroid data presentation	18147
honoring 1st artificial earth satellite, USSR	9142
Juno II summary project report	10695
materials, optical properties	1270
meteorological—	19905
automatic picture transmission (APT) TV camera system	
bibliography	20985
results and objectives, etc	14773
system—	18118
agreement with Canada	9418
analyses	14901
TIROS II meteorological data, television cloud photography, catalog	14800
TIROS III, radiation view of hurricane ANNA	9177
TIROS IV meteorological data, television cloud photography, catalog	11407
weather, USSR study	10583
motion of 24-hour satellite, theory, etc.	14553
Musen's theory of artificial satellites analytical representation in terms of orbital true Congitude	3133
NASA topside sounder program	20984
Nimbus, and its communications system	5571
observations—	
accuracy problems, USSR studies	15761
equatorial ionosphere	12869
observatory generation, papers	10988
orbit computation program for Izsak's 2d order solution of Vinti's dynamical problem	5578
Orbiting Solar Observatory I, scanning mechanism for X-ray spectrometer	1271
orbits—	
Vinti's accurate intermediary, differential correction	1283
von Zepel and modified Hansen methods compared	21005
power input to small flat spinning plate from diffusely radiating sphere	5580

	Entry
Satellites—Continued	
Project Relay—	
1st space communications experiment designed to link 3 continents	5536-37
operations, progress report, hearings	8097
Project Syncom, global communication network	14538
Project Telstar, operations, progress report, hearings	8097
propellant required to maintain earth orbital vehicle in useful orbit between 2 specified altitude limits	16383
publications, list	14652
reliability, environmental tests	16388
S-46, flight data	1270
Saturn SA-1 model lateral vibration characteristics, investigation	5592
scientific, purposes of environmental testing in exploration of space	16395
solar cell generator, preliminary design	18150
space communications system—	
experiments, report	286
ownership and control hearings, print additional copies, reports	8079, 11864
spherical, earth reflected solar radiation incident upon	9147
stretch yo-yo de-spin system—	
analytical theory	9169
dynamic tests	19920
telemetry signals, automatic data processing	21017
Telstar I, background information	20976
thermal radiation incident	3142
torques produced by magnetic field on rotating cylinders, etc	5613
track computation for display purposes	7368
tracking stations program, agreement with—	
Australia	11310
Mexico	16594
tracking systems—	
mathematical models and errors, theory, errata	3134
operation of Baker-Nunn camera	11485
USSR equipment	6853
type recorders, application of modularization concept	1285
use in meteorological investigations	18171
see also Space stations—Three-body problem.	
Saturn (rocket), see Rockets.	
Saudi Arabia:	
defense, loan of aircraft, agreement	20182
economy, basic data	5068
educational data	8168
market for U.S. products	5092
military service regulation for non-commissioned officers and privates	12476
preparing shipments to	5071
Sauerkraut, canned, standards for grades	9536
Saugus, Mass., motor carrier accident	19367
Saunders, R. A., analysis of spacecraft atmosphere	11167
Sautter, Howard E., soil survey report, Dund County, Nebr	9390
Savage, Howard F., momentum accommodation of N <sup>+</sup> , N <sub>2</sub> <sup>+</sup> , and A <sup>+</sup> incident on copper and aluminum from 0.5 to 4 kev	19932

# INDEX 1963

Entry	Entry
Savannah (nuclear ship):	Savings bonds—Continued
maritime matters—	investments of individuals.... 3807, 12103
operational arrangements for	issued and redeemed..... 4269
visit, agreement with Nether-	program—
lands..... 16582	aids debt management (re-
public liability for damage	marks)..... 3387
caused, agreement with Nether-	to finance deficit, etc. (remarks)..... 3388
lands..... 16581	regulations governing, department
use of German territorial waters	circular, amdt..... 21144
and ports, agreement with Fed-	series A-E, tables of redemption
eral Republic of Germany.... 5736	values..... 1391, 12976
review of developments..... 11689	series E, general information, de-
safety assessment..... 18596	partment circular..... 21145
upgrading analog computer analy-	series F. & J., tables of redemption
sis..... 5924	values..... 1392, 12977
Savannah, Ga.:	series H, general information, de-
occupational wage survey—	partment circular..... 21146
departmental edition..... 14467	voluntary pay roll savings plan pro-
document edition..... 13448	vision..... 3386
Travis Field, weather observations,	Savino, Joseph M., hydraulic charac-
hourly, summary, decennial	teristics of NASA Plum Brook
census of climate..... 14786	reactor..... 16367
Savannah River, Trotters Shoals project,	Sawlogs, see Logs
hearings..... 13667	Sawmills:
Savery-Pot Hook project:	Arkansas, management staffing
Colorado and Wyoming, water re-	needs..... 1457
source development..... 230	injuries and accident causes, sur-
construction, etc., hearing..... 4783	vey 1956-57..... 16275
Saveson, Irwin L., drainage system	Ohio, buying practices and markets,
for sugarcane..... 18395	1955-58..... 6481
Savin, Raymond C., solutions for flow	residues, raw materials for W. Va.
about flat-top wing-body con-	wood-using industries, survey..... 12189
figurations..... 5510	southern, industry wage survey..... 12807
Saving and thrift, savings and home	Sawyer, Richard H., simulator study
financing, 1963..... 20669	of alrpace requirements for
Savings accounts, see Banks and	supersonic transport..... 18156
banking.	Sawyer, Robert K., military advisors
Savings and loan associations:	in Korea, KMAC in peace and
business in new environment	war..... 5408
(address)..... 8231	Saxon, James J.:
current setting (address)..... 498	remarks—
directorship responsibilities (ad-	Feb. 22, 1963..... 4658
dress)..... 20667	Mar. 22, 1963..... 6059
flow of savings and mortgage lend-	May 1, 1963..... 9794
ing activity, all operating sav-	Sayapullo Mine, Peru, uranium re-
ings and loan associations..... 3451	cognissance in area..... 16854
Government policy, report of Com-	Sayre, W. W., uptake and transport
mittee on Financial Institu-	of radionuclides by stream
tions..... 10028	sediments..... 10292
industry in transition (address)..... 20670	SB series..... 149,
mortgage interest rates on con-	1864-72, 4553-54, 7738-41, 9707,
ventional loans, largest insured	11598, 13266, 15029-30, 18626-
savings and loan associations,	629.
summary..... 3932	SBA, see Small Business Administra-
movement in South America (ad-	tion.
dress)..... 4891	SBR, see Styrene-butadiene rubber
participation loan transactions..... 4004	Scabies:
problems (remarks)..... 8230	cattle eradication activities report,
savings and home financing chart	1962..... 1620
book..... 15486	sheep, eradication—
savings and mortgage activity,	activities report, 1962..... 1621
selected balance sheet items,	failure to maintain concentration
FSLIC insured associations..... 3745	of lindane in dipping vats..... 5801
selected balance sheet data, all op-	inspections by counties, 1962,
erating savings and loan asso-	map..... 1660
ciations..... 3451	outbreaks reported..... 5808
share accounts insurance, increase	progress, maps..... 1659, 1661,
maximum coverage for each de-	training schools..... 5806
positor, hearings..... 15304	Scaffolding, prefabricated, Federal
strength and flexibility in financing	item identification guides for
(address)..... 499	supply cataloging, supple-
trends, 1961..... 500	ments..... 3655
what we need to know about regu-	Scale insects, see California red scale.
latory remedies for unsound	Scale model studies on snow drift-
practices (address)..... 19175	ing..... 4840
see also Federal savings and loan	Scales (weighing instruments):
associations.	platform, to 2000 lbs, Navy calibra-
Savings and loan industry in Heller	tion program, technical man-
report..... 10150	ual..... 3239
Savings banks, see Banks and Bank-	scale for weighing beehives..... 5792
ing.	weighing and measuring devices,
Savings bonds:	specifications, etc..... 18184
bond tips from your U.S. savings	Scaling laws for material damping.... 3132
bond reporter..... 7422	

# JANUARY-DECEMBER

	Entry		Entry
Scallion, William I., low-speed static longitudinal and lateral characteristics of delta-wing model, etc.	7238	Schillaci, Carmelo, relief	8029
Scallops, sea, fluctuations in populations of Maine, method of predicting	4946	Schilling, Guy A. W., how U.S. cotton is sold for export	15342
Scammon, Richard M., presentation on population of U.S.	294	Schimmel, J. T., use of large-diameter auger in mining pitching anthracite beds	3092
Scandium oxide, low-temperature heat capacities and entropies at 298.15° K of sesquioxides of scandium, etc.	14511	Schindler, A. I., Hall coefficient of superconducting and normal Nb-25% Zr	18234
Scandium sesquioxide, thermodynamic data	9127	Schindler, G. W., isometric deformation of screw surfaces	11079
Scanning, mechanism for satellite borne X-ray spectrometer	1271	Schiner, George R., ground-water exploration and test pumping Halma-Lake Bronson area, Kittson County, Minn.	14033
Scarab beetles, see Beetles.		Schippell, Herbert R., Trailblazer I reentry-body wind-tunnel tests	14583
Scattering:		Schirra, Walter M., Jr., space flight, orbital, Oct. 3, 1962-- results	3169 5540
electron-hydrogen scattering, non-adiabatic theory	14550	Schlain, David, alumina reduction cell	16336
multiple of j-values of s-type neutron resonances, determination	12955	Schlanger, Seymour O., subsurface geology of Eniwetok Atoll	19308
positron-hydrogen theory	16386	Schlick, Donald P., ventilation of continuous-miner places in coal mines	10939
turbulent, propagation of polydispersed admixture, along vertical and in direction of wind	1018	Schlefer, Wilhelmina G., relief	11790
Scattering of radio waves, see Radio waves.		Schlots, Fred E., soil survey report, San Juan County, Wash.	1503
Schaefer, John W., regenerative, etc., cooling effects on electrothermal thruster performance	20979	Schmarle, David P., evaluation of 67 ft. D. recovery parachute	5860
Schaefer, Karl E.:		Schmidt, E. D., terminal velocities of small fruits	20264
alveolar pathways during 90-foot breath-hold dives	7200	Schmidt, J. P.:	
interaction of aerosols and air ions	7197	changes in intestinal flora of ground squirrels during hibernation	11500
submarine atmospheres, experiences	7188	effect of hibernation on retention of viral agents by Arctic ground squirrels	18476
Schaff, Herbert R., relief	13518	Schmidt, R. A., boiling water-separate superheat reactor plant, 600 MWe, design study	7696
Schaller, N. C., expressing mass unbalance	11018	Schmidt, Robert G., geology and ore deposits of Cuyuna North range, Minn.	20734
Schamadan, James, dynamic test of aircraft litter installation	13098	Schmit, Lucien A., structural synthesis of symmetric waffle plate	3162
Schechter, Samuel, benchmarks for BLS payroll employment statistics	5458	Schmittou, Mary J., preliminary inventory of records of Puerto Rico Reconstruction Administration	7307
Scheffer, Victor B., list of marine mammals of world	10200	Schmitz, G., profile of arc column	9594
Schelman, James, effect of helicopter rotor-blade tip vortex on blade airloads	11032	Schnabel, Robert W., geology of Burdock quadrangle, Fall River and Custer Counties, S. Dak.	10275
Schembor, Edward H., bibliography of technical reports etc., covering aerial delivery research activities at Armed Forces Food and Container Institute	9368	Schneider, Robert, ground-water provinces of Brazil	614
Schenectady, N.Y.:		Schneider, Samuel J., melting points of metal oxides	19951
occupational wage survey--departmental edition	12800	Schocken, Klaus, optical properties of satellite materials, etc.	19905
document edition	11744	Schofield B. Lyle, cockpit displays for pilot control during hypersonic lifting re-entry	5859
Scherrer, Richard, lateral control and dihedral effect of wing-body combination with variable-incidence triangular wing and wing-tip allerons, etc.	5509	Scholarships:	
Schertz, L. P., basic provisions of European Economic Community grain regulations	12149	aerospace information sources	4824
Schexnayder, Charles J., Jr., tabulated values of bond dissociation energies, etc., for molecules found in high-temperature chemical reactions	12874	foreign scholars and visitors, on official educational and cultural exchange programs, tax advice	10319
Schiff bases, preparation and electrophysical properties of poly-Schiff bases, USSR study	20865	Schomer, H. A., mechanical thumb for measuring firmness of fruits	11456
Schiffer, Clara G., illness among children	20367	School attendance:	
Schiffman, Jacob:		disability days, U.S., July 1961-June 1962	20112
special labor force reports--marital and family characteristics of workers, Mar. 1962	9078	high school dropouts, 20th century tragedy	17378
multiple jobholders in May 1962	16294		

# INDEX 1963

	Entry
School books, <i>see</i> Textbooks.	
School buildings:	
dual purpose blast resistant school and community shelter, basement type design.....	11655
elementary and secondary schools, fall 1962, statistics.....	10070
fallout shelter design competition, prize-winning awards.....	9740, 13317
federally affected areas, construction assistance.....	4806
annual report, 1962.....	11896
extend law, etc.—	13607
hearings —	
report —	
general usage facilities and equipment for secondary schools, selected references.....	12080
higher education facilities, non-residential, gross area by facilities category.....	12064
higher education physical facilities, objectives in education, 1960-70.....	6350
metropolitan centers facilities, planning problems.....	6337
school facilities services (series).....	12080, 20642
School buses:	
inspections, State provisions, summary.....	389, 13867
State plans and procedures for purchasing, summary.....	13866
School children, <i>see</i> Children.	
School districts, Hanover, N.H.-Norwich, Vt., Interstate School District, granting consent of Congress to establish, reports.....	17108, 20594
School dropouts, <i>see</i> High schools—School attendance.	
School facilities, <i>see</i> School buildings.	
School facilities services.....	4822, 12080, 20642
School finance, <i>see</i> Education.	
School lands, eligibility of public lands for selection by Utah as indemnity for lost school lands, opinion of Attorney General.....	9020
School libraries, <i>see</i> Libraries.	
School life (periodical).....	4170
School lunches:	
activities, nutrition committee news.....	3980
District of Columbia, appropriation of public money, report.....	13784
national program—	
general description.....	18384
telling the story.....	14831
nutrition and school lunch, selected references.....	18403
school feeding program, agreement with Israel.....	14725
school lunch serves Nation, how it operates, etc.....	14823
selected references, 1952-61, list.....	5617
statutes, compilation.....	1683
School of Aerospace Medicine:	
aeromedical reviews.....	4409, 5884-87, 7628, 16788-789, 18499, 20309
lectures in aerospace medicine, 1963.....	16780
research report.....	68
technical documentary reports.....	69-83, 1775, 4410-23, 5888-92, 7629-40, 9628-34, 11514, 13214-218, 14917-922, 16790-808, 18500-507, 20310-313.
School shelters, <i>see</i> Protective shelters.	
School supplies:	
and equipment administration, selected references.....	4822
instructional, etc., 1650-1900.....	6348

	Entry
Schoolhouses, <i>see</i> School buildings.	
Schools:	
administration, publications, list.....	20084
administrators, fallout shelter guide.....	4608
better financial accounting.....	19108
boarding schools—	
conclusions based on educational work, USSR study.....	5116
elementary grades, joint work of teacher and class advisor, USSR study.....	2714
cybernetics, communications theory, USSR study.....	2917
District of Columbia, discipline—	
hearings.....	7992
suspension or dismissal of unruly pupils, report.....	9899
use of reasonable force, report.....	9900
dropouts—	
problem, importance of getting facts, etc.....	17368
rates among farm and nonfarm youth.....	19088
references.....	15425
educational attainment, years completed by age, ethnic origin, etc.....	18704
elementary, central office services, organization, responsibilities, and coordinating activities.....	8158
enrollment—	
decline in rate of increase.....	4585
Oct. 1962.....	18688
population of U.S., 1960.....	1877
Federal assistance, deny to institutions which practice racial discrimination—	
hearings.....	17168
report.....	18908
federally affected areas—	
extend law, etc.—	
hearings.....	11896
report.....	13607
operation assistance, annual report 1962.....	4806
fires, prevention, control, protection.....	384
graduates, advanced work allocation, regulations on labor ministry organization and state council notice, Communist China study.....	5314
guidance workers certification requirements.....	15431
incorporation of shelter.....	9739
juvenile delinquency prevention, symposium.....	8181
keep children in school for educational advantages and better job opportunities.....	12781
local and State systems, property accounting guide, implementing.....	8172
Mexico, offering summer study and academic programs, list.....	13865
Poland, educational system, survey.....	862
prayerful mediation, permit, hearings.....	4787
prayers—	
not establishment of religion, hearings.....	4787
permit, amend Constitution, hearings.....	4787
preparation in personnel work, programs, etc., 1963-64.....	13854
progress, age-grade, of farm and nonfarm youth, 1960.....	17354, 20625
public—	
bond sales, 1961-62.....	4807, 20630
bond sales, 1962-63.....	20630
civil rights—	
cities in North and West.....	181
Southern States, 1962.....	1935



# JANUARY-DECEMBER

	Entry
Schools—Continued	
public—Continued	
District of Columbia, educational employees on leave, increase partial pay, report.....	18895
elementary and secondary, teacher turnover, 1959-60, report.....	15450
finance program, 1961-62—	
Alabama .....	19111
California .....	6338
Connecticut .....	12073
Florida .....	13856
Idaho .....	12074
Massachusetts .....	19112
Mississippi .....	17386
Wyoming .....	17387
finance program, 1962-63—	
Alaska .....	6339
Arizona .....	15441
Arkansas .....	13857
Hawaii .....	19113
Illinois .....	15442
Indiana .....	17388
Iowa .....	12075
Kansas .....	12076
Kentucky .....	20641
Missouri .....	10077
Montana .....	19114
Nevada .....	6340
New Mexico .....	17389
New York .....	12077
Ohio .....	12078
Oregon .....	13858
Pennsylvania .....	13859
South Carolina .....	15443
South Dakota .....	15444
Utah .....	13860
Vermont .....	15445
Washington State .....	10078
West Virginia .....	17390
instruction in science, etc., Federal financial assistance, regulations .....	19099
guidelines .....	20634
key educational media personnel, directory .....	17379
programed instructional materials, survey, 1961-62 .....	10083
public systems—	
directory, 1962-63 .....	13843
large, 1959-60, current expenditures per pupil .....	2150
Puerto Rico, education and citizenship, interim report .....	11893
pupil marks and school marking systems, bibliography .....	19115
staff personnel administration, selected practices and issues .....	8187
State systems, statistics, 1959-60 .....	8188
see also Dental schools—Education—Elementary education—High schools—Junior high schools—Medical schools—Natal education—Public health schools—School districts—School lunches	
Schorr, Alvin L., slums and social insecurity .....	14700
Schreiber, Zara M., relief .....	17095
Schreier, Stefan, breakdown voltages of some electronegative gases at low pressures .....	12872
Schriever, B. A. ;	
addresses—	
Nov. 13, 1962 .....	4399
Nov. 15, 1962 .....	4395
May 18, 1963 .....	9620
June 12, 1963 .....	11509
Schroeder, Ernest F., missiles, spacecraft, and aircraft, labor market developments .....	13874
Schroeder, Harry W., rough rice, effects of moisture, etc., on maintenance of quality .....	9580

	Entry
Schroeder, Peter B., Korean publications in National Agricultural Library .....	14594
Schubert, Gilbert H. ;	
chemicals for brush control in California reforestation .....	6495
silvical characteristics of giant sequoia .....	8299
Schuerch, H. U. ;	
filamentary structures .....	3163
folding deformations in expandable structures .....	3161
Schuler, Walter H., safeguards for vital statistics .....	16533
Schultz, E. D. ;	
absorption cross sections for wavelengths less than 3000 Å .....	19895
solar flux incident at top of atmospheres of earth and neighboring planets, etc .....	19891
Schultz, Leonard G., clay minerals in Triassic rocks of Colorado Plateau .....	19296
Schultz, Vincent, radionuclides and ionizing radiation in ornithology, selected bibliography .....	7716
Schumm, S. A. ;	
alluvial river channels, tentative classification .....	19305
channel widening and flood-plain construction along Cimarron River in Southwestern Kansas .....	19310
disparity between present rates of denudation and orogeny .....	15614
Schuster, Joseph H., research and development in industry, 1960, final report on survey of R & D funds and R & D scientists and engineers .....	12934
Schuster, Louis H., business enterprises of Negroes in Tennessee .....	1464
Schwaniger, Arthur J., lunar flight study series, trajectories in earth-moon space, etc .....	12883
Schwartz, Bella, scientific and technical personnel in Federal Government, 1959 and 1960 .....	1362
Schwartz, F. G., survey of research on thermal stability of petroleum jet fuels .....	1206
Schwartz, Harry S., address, Nov. 27, 1962 .....	498
Schwartz, John R., selective guide to published climatic data sources prepared by Weather Bureau .....	20245
Schwarz, Francis K., probable maximum precipitation in Hawaiian Islands .....	16667
Schwartz, J. H., tungsten sheet development by use of ultra-fine tungsten metal power .....	18466
Schwikert, Frank D., relief .....	6098
Science :	
academies of sciences, USSR, nominations and elections of members, etc, 1962 .....	6821
Academy of Sciences, Bulgaria, Atomic Center, research information .....	14353
Academy of Sciences, Estonian SSR, scientists in ideology .....	19692
Academy of Sciences, Hungary—	
associations and societies .....	7060
Biological and Medical Sciences Division, activities .....	6760
congress and general assembly, 1963 .....	19453
Academy of Sciences, Kazakh SSR, activities in 1962 .....	16034

# INDEX 1963

	Entry
Science—Continued	
Academy of Sciences, Latvian SSR—	
activities	0670
institutes serving agriculture	10596
Academy of Sciences, Rumania, betatron	8864
Academy of Sciences, Ukrainian SSR—	
activities	8825
presidium activities	10572
reports, translations	12415
Academy of Sciences, USSR—	
activities, measures for improving, etc.	16033
affiliates, trends in research, 1963	8659
anniversary meeting	17667
annual meeting	12659
Cytology Institute reports, abstracts	17576
Department of Chemical Sciences, general meeting	5162
dissertations, 1962, list	12574
herald	12373
news, translations	6680
Siberian Department, accomplishments	15725
social sciences, recent reports	8065
Technical Sciences Department, technical cybernetics, news	19402
Academy of Sciences, USSR and UkSSR, Departments of Technical Sciences, news of joint session	2615
activities in Latvian SSR, USSR study	17899
agricultural, USSR studies	8887
American manpower, 1960, report of national register of scientific and technical personnel	3191
articles from Doklady Akademii Nauk, USSR	5134
atomic, of Hungary	798
biological and physical, degrees earned, 1949-60	17365
bio-sciences, Soviet and Chinese articles, English abstracts	3626
Bulgaria—	
pure science and practical science, program for development	6667
regulation on state committee for science and technical progress	16058
Bulgarian-Rumanian cooperation agreement	10656
classification, Library of Congress	9087
cold regions science and engineering—	
engineering	19138
physical science	2190
common ground for men of any nation (remarks)	13249
Communist China—	
activities	2971
translations	648,
912, 2503, 2580, 2963, 2993,	5169,
6767, 6920, 7075, 8497,	8917,
8947, 10437, 10443,	10446,
10502, 10516, 10528,	10592,
10614, 10646, 10738,	12348,
12392, 12613, 14309,	14408,
14424, 15800, 15928,	15973,
15996, 16068, 16203,	17711,
19392, 19452, 19468,	19479,
19557, 19665, 19737,	20770,
20879	
contemporary, complex study of man as next task, USSR	7007
cosmic flights and science, USSR study	15846
courses, written materials, films, studies supported by National Science Foundation	13691

	Entry
Science—Continued	
development—	
socialist countries, USSR study—	20769
relationship to labor productivity, USSR study	8837
earth sciences—	
arctic investigations, northeast Greenland	1749
East European journals, abstracts	1027,
2543, 5275, 5310, 5381,	6674,
6710, 6797, 6949, 8524,	8687,
8774, 8882, 10535, 10607,	10673,
10722, 10799, 12527,	12666,
12671, 14094, 14290,	14328,
14418, 15893, 15923,	16138,
17618, 17825, 17915,	17989,
19521, 19612, 19704,	20889
gravity network at USAF air bases	5855
USSR conferences and research, translations	20885
USSR, studies and conferences	2528
East European journals, abstracts	734,
778, 858, 901, 922, 940, 964,	
1027, 1048, 1069-70, 1092, 1111,	
2494-95, 2542-43, 2597-98, 2613,	
2645-47, 2675, 2678, 2726-30,	
2755, 2757, 2777, 2812, 2874-77,	
2928-29, 2947-50, 5121, 5173-75,	
5206-8, 5243, 5275-78, 5308-10,	
5350, 5381-84, 5420-21, 6637B,	
6639, 6672, 6674, 6699, 6710-11,	
6714-15, 6717, 6796-98, 6820,	
6849, 6879-81, 6911-12, 6949,	
6981, 7014, 7087-89, 8475-77,	
8479, 8522-24, 8586, 8608-9,	
8615, 8685-88, 8774-79, 8846,	
8882-86, 8962, 8976, 10394,	
10396, 10419, 10428-430, 10453-	
455, 10466-467, 10534-537,	
10546-547, 10606-610, 10673,	
10677, 10712-715, 10720, 10722,	
10764, 10793-799, 10866-868,	
12298, 12300-305, 12418-419,	
12438-439, 12448, 12525-528,	
12555, 12558-560, 12579, 12664-	
671, 12684-687, 12732, 12740,	
12742-744, 12746-747, 14086,	
14094, 14108-110, 14225-227,	
14258, 14290-291, 14325-329,	
14333-334, 14370-371, 14375,	
14412, 14417-418, 15696-698,	
15714-715, 15744-745, 15874,	
15877-878, 15884, 15893, 15923-	
924, 15983, 15994, 16007, 16014,	
16138-142, 16162, 16166, 16201,	
16204-205, 16207, 16218-220,	
17590, 17598, 17617-618, 17621,	
17639, 17692, 17716-718, 17780,	
17791-792, 17824-825, 17837,	
17855-857, 17876, 17897, 17914-	
915, 17942, 17954, 17986, 17988-	
990, 19394-395, 19428-429,	
19483, 19501, 19513, 19521-522,	
19527, 19540-541, 19585, 19604,	
19612-613, 19623, 19646-648,	
19704-706, 19722-723, 19725,	
19747, 19760, 19771, 20763,	
20794, 20837, 20839-841, 20874,	
20886-889	
East European literature, guide	5646
economic and social implications, current projects, 1962	9250
education—	
impact on economy of U.S. (remarks)	9695
NSF program	14615
programs, 1964, special projects announcement	7341
supervision for quality education, conference 1962, report	17395
environmental, financial aid for students, listing	18284

	Entry
Science—Continued	
exchange of information, need of new measures to expand, USSR study	10776
Federal financial assistance for strengthening instruction in public schools, regulations	19099
guidelines	20634
Federal funds, 1961-63	11128
5-cent commemorative postage stamp (poster)	18269
foreign scientific policy, coordination, staff study	6202
France, research, 4th plan	19484
future international meetings, world list	4314
general, USAFI course, study guides	6310, 13832
Germany, organization of training, research, etc.	16445
Ghana's institutions, USSR study—graduate enrollments, etc., selected fields at leading schools, 1960-62	20866, 19969
Hungary—development and problems	8549
recent statutes	6702
India, scientific activities organization	3193
information activities of Federal agencies	12935
Air Force Systems Command	12935
international notes	11139
international reports	3193
international scientific affairs, 1962	18324
interrelationship with cybernetics, USSR study	12463
Israel, information, translations	748, 1150, 2776
Kazakh SSR, activities	6788
Latvian, in service of national economy	883
machine translation and information processing developments	14148
management challenge of the sixties (address)	4399
manpower—meeting needs	3260
profiles	16446
medical sciences of USSR	2707
modern—	
and your child, new concepts	19105
need for cadres, USSR study	5203
natural, and national long range research plan, status evaluation, Hungarian study	15909
naval, surveys (series)	11151
new horizons, USSR translations	10717
North Korea, scientific publications and their authors	16028
North Vietnam, translations	6813
NSF institutional grants, 1963	3192
optimum use to achieve national goals (address)	1960
Panel on Science and Technology—4th meeting, report	2060
5th meeting—proceedings	6206
report	8010
past, present and future impact (remarks)	5954
personnel, role in raising labor productivity, USSR study	19503
philosophical—	
aspects, USSR studies	10098
higher school scholarly papers (USSR periodical), translations	8567
physical—	
graduate training grants	3260
National Bureau of Standards research mission, general information	12899

	Entry
Science—Continued	
physical—Continued	
NBS national standard reference data program, background information	14604
selected services, major principles—	
biological sciences of importance for general education, list	4825
physics, chemistry, geology of importance for general education, list	4826
Poland, long range plans for development	8515
process teaching, aids	15446
progress during building of communism, USSR study	12597
professional literature for teachers of elementary science, selected references	19109
publications, annotated guide to selected listing	13863
readings on applications to problems of less-developed nations	5097
revolutionary changes, challenges to higher education (remarks)	5951
role in solving naval warfare problems, USSR study	17900
Rumanian—	
progress in years of people's rule	12399
recent statutes	7127
science and future (address)	1051
science and individual in changing world (address)	11593
science and technology, SF (series)	4171
science, technology, tax policy, and economic growth (remarks)	7500
scientific and technological policy, planning, and organization, papers prepared for United Nations conference	2441
scientific and technological progress under capitalism, Soviet views	2867
scientific information dissemination of National Science Foundation programs	7424
scientific information notes, national and international developments	4172
scientific information systems, design, management and use, Federal plans for improvement, hearings	12017
scientific tests, publications, price list	18281
Seattle World's Fair, U.S. exhibit, report	7814
significance of cybernetics in German Democratic Republic	7085, 10506
soil, abstracts pertaining to Communist China in USSR journals	17740
Soviet-bloc scientific conferences, reports	14137
Soviet Russian scientific and technical terms, selective list	12816
specialized, information services in U.S., survey	9683
subjects and fields of specialization, list, USSR study	8737
summer training programs for high-ability secondary school students, 1963	3199
supervision for quality education	4828
surveys of science resources series	9251

# INDEX 1963

	Entry		Entry
Science—Continued		Science course improvement projects	
teachers—		series	1361
public high schools, basic information	17393	Science Service, Inc., incorporation, grant Federal charter, report	6174
secondary school, characteristics and loads	9252	Science, technology, and development (series) - 633-634, 2437-43, 5094-96	
summer institutes and conferences	1363	Scientific and medical training in USSR	899
summer institutes, secondary school, 1963	3198	Scientific and technical aerospace reports, cumulative indexes	11086
United States high schools	8177	Scientific apparatus and instruments: importation agreement—	
teachers' institutes—		report	20536
academic year 1963-64	1359	text	20514
in-service 1963-64	11129	industries, outlook for 1963 and review of 1962	5981
training mind for creative thinking, USSR study	12650	NSF undergraduate instructional program grants, 1962-63	11133, 14616
transfer of information, responsibilities of technical community and Government	5677	Scientific directory, 1963, and annual bibliography, 1962	9348
USSR—		Scientific institutions, see Nonprofit institutions.	
abstracts—		Scientific research:	
biology and medicine	15814, 17587, 17933	academies of sciences of socialist bloc countries, aims, etc., Polish study	8574
chemistry and metallurgy	17611, 17947, 19629	affiliates of Academy of Sciences, USSR, trends in 1963	8659
electronics and engineering	14106, 15949, 17809, 19682	Air Force objectives	18464
physics and mathematics	12767, 15672, 17808, 19683	contracts for research and design work, USSR	16183
activities	5259	documentation, current research and development	11261
activities and personalities	17581, 17672	documentation program of Office of Science Information Service, NFS	3316
conference of Moscow Engineering Physics Institute, 1962	5189	employment of aliens, report	13753
Lenin prizes, 1963	12446	expenditures and manpower for research and development in colleges and universities, 1958	9251
present tasks confronting problems and achievements, translations	5269, 10721	Federal organization for activities, 1962	7342
recent activities	19607	funds for research and development—	
reflections on scientific progress, research needed in development of agriculture and medicine	12576	industry, 1960, final report on survey	12934
scientific-technical progress and regeneration of technical engineering cadres	10408	industry, 1962, preliminary report	18212
serial publications, list, 1945-60	19813	national trends, 1953-62	19985
translations	2595	Geological Survey 1962, short papers in geology, hydrology, and topography	6559
translations from science and life	2594	grants, administration and submission of proposals	14614
weapon for building communism, USSR study	2709	institutes and laboratories, coordination with production, USSR report	2882
women in science, present and prospective opportunities (paper)	16697	international organizations, library, documentation, and information services guide	5464
Yugoslavian doctorates, 1961-62	12578	manpower, annual conference, 1962, highlights, etc.	16447
<i>see also</i> Space science— <i>also</i> names of sciences— <i>also</i> headings beginning scientific.		medical and health-related	
Science Advisory Panel, establish, report	6237	Federal support, 1947-64	19970
Science and Astronautics Committee, House:		foundation expenditures, 1960	3178
activities, report	6207	national long range research plan, status evaluation, Hungarian study	15909
calendar	3843	planning, financing, and utilization, USSR	10779
committee prints	2058-61, 6201-5, 6207-8, 13671	Poland, need for coordination	8483
hearings	304, 6206, 8011, 13670, 15332, 18958-959	proposals submitted to sponsors by New York University, etc., case study of support	19984
investigations and studies—		research grants of N.I.H., 1962, index	11111
aeronautical, outer space, and other scientific research—		Rumania, perspectives	19693
authorization, report	6114	science at work, careers in Commissioned Officer Corps, C&GS	20389
expenses, report	6133	scientific communication in Government, organization and coordination of information	18275
reports	286-287, 8010, 15246, 18903-904		
Science and technology (Rumanian periodical):			
translations	8924		
Science and Technology Commission, create, report	6237		
Science and Technology Office:			
appropriations, 1964, hearings	18919		
establish, staff study	2058		
Science bulletin (Chinese periodical):			
articles	10443		

Entry	Entry
Scientific research—Continued	Scientists—Continued
small business concerns interested	scientific manpower from abroad,
in performing research and de-	errata ..... 1360
velopment, list ..... 11270	scientists and society (remarks) ... 9700
space physiology, experimental re-	testimony on space goals, hearings—
search ..... 18181	USSR—
systems development and manage-	and Czechoslovak, information ... 17659
ment, Govt. contracting, hear-	biographies ..... 788,
ings ..... 13652	2930, 6966, 8949, 10652, 10669,
USSR—	17812.
achievements under communism,	close cooperation between sci-
public inspection of plan ful-	entists and practical workers ... 6662
fillment ..... 5281	propagandizing scientific atheism
coordination, new form in eco-	as honorable task ..... 17729
nomics ..... 19637	see also Agricultural research sci-
finance ..... 6770	entists—Social scientists.
legal aspects ..... 17997	Scintillation, radiometry methods ... 4471
scientific education, develop-	Scintillation counters:
ments, 1962 ..... 5399	Cerenkov, measurements of nuclei
Yugoslavia ..... 10597	in primary cosmic radiation ... 16375
Council for Coordination of Sci-	characteristics and use ..... 4471
entific Research, members ..... 17746	telescope for charge and mass iden-
Federal Council for Coordinating	tification of primary cosmic
Scientific Research, ruling on	rays ..... 16377
naming President, general sec-	Scioto River Basin:
retary and members ..... 16036	flood control survey, engineer re-
Institutions, list ..... 15786	port—
see also subjects.	departmental edition ..... 4871
Scientific societies, scientific-technical	document edition ..... 4690
societies, role in USSR ..... 19697	Scombrids, see Tuna fish.
Scientific-technical societies USSR	Scotland:
(periodical):	north and east coasts, sailing di-
translations ..... 2541	rections ..... 3203
Scientists:	west coast, sailing directions ..... 11139
Bulgarian scientific workers, decree	Scott, Clarice L., men's suits, how to
on specialization ..... 10403	judge quality ..... 18425
career opportunities—	Scott, E. J., power series solutions of
civilian, Air Force Dept. .... 1748	one-dimensional flow equation
crops research ..... 1710	for exponential and linear dif-
conducting research and develop-	fusivity functions ..... 1629
ment in colleges and univer-	Scott, George S., flammability of
sities, 1958 ..... 9251	trichloroethylene ..... 5502
Conference of Scientific Manpower,	Scott, Glenn R., bedrock geology of
papers ..... 16447	Kassler quadrangle, Colo. .... 14025
creative scientist, training and role	Scotton, Donald W., operating costs
(remarks) ..... 9694	and ratios, retail, bibliog-
Czechoslovak, physical, biographic	raphy ..... 11273
data ..... 17592	Scottsville, Ky., geology and ground-
East European, information ..... 8679	water resources of area ..... 10296
employment in Federal Government,	Scouring and combing plants, see
1959-60 ..... 1362	Wool.
employment in industrial research,	Scout, see Rockets.
etc.—	Scranton, Pa.:
final report on survey ..... 12934	electric facilities of area, map ... 516
preliminary report ..... 18212	occupational wage survey—
honors and award practices of Fed-	departmental edition ..... 1174
eral Government ..... 20380	document edition ..... 279
human resources, training of sci-	Wilkes-Barre, Scranton Airport,
entific and technical personnel ... 2443	weather observations, hourly,
Hungarian, biographic notes ..... 10761	summary, decennial census of
ideology, Estonian Academy of Sci-	climate ..... 14792
ences general meeting, USSR	Scrap:
study ..... 19692	consumption and stocks at brass
in engineering schools, 1961 ..... 21044	and wire mills, mineral indus-
Israel personalities, biographic in-	try survey, monthly ..... 3482
formation ..... 20899	high-temperature alloy scrap, re-
manpower in science, profiles ..... 16446	claiming ..... 10963
manpower resources in colleges and	Iron and steel—
universities, 1961 ..... 3194	final data, monthly ..... 3809
manpower, supply, demand, and	minerals yearbook chapter ..... 19841
utilization, staff study ..... 6208	preliminary data, monthly ..... 3810
medical, Bulgaria, biographic in-	materials, defense scrap yard hand-
formation ..... 8821	book ..... 2114
metropolitan area distribution, na-	metals, temporary suspension of
tional register 1960 ..... 3195	duties, continue—
need for cadres in modern science,	law ..... 13424
USSR study ..... 5203	reports ..... 11868, 13746
research and development, 1956-	Scrapie, slaughter program, compen-
61 ..... 11132	sate sheep owners, hearing ... 17158
responsibilities to their Nation and	Screens:
world (remarks) ..... 16864	air, for insect control ..... 13158
salaries and characteristics, na-	use of sieve bend and scalping deck
tional register 1962 ..... 3196	with vibrating screen in
scientific manpower bulletins ... 3195-96	dewatering and draining dense
	medium from fine coal ..... 20968



# INDEX 1963

Entry	Entry
Screens—Continued	Seaborg, Glenn T.—Continued
vinyl-coated glass fiber insect screening and louver cloth, standard of trade.....	addresses, etc.—Continued
4513	Sept. 1, 1963.....
Screw threads, standards for Federal services.....	Sept. 11, 1963.....
19950	Sept. 25, 1963.....
Screwworm:	Oct. 19, 1963.....
eradication—	Seafaring premium pay on privately operated United States flag merchant ships.....
facts.....	16315
questions and answers.....	Seagrave, Richard C., turbulent mass transfer in liquid streams.....
13	11561
Scribers, scribing on coated plastics, techniques.....	Sealers, Federal item identification guides for supply cataloging, supplements.....
1731	3657
Scribing on coated plastics.....	1731
Scriben, L. Edward, address, Nov. 15, 1962.....	Sealift magazine.....
204	4173
Scroggins, James R., detail wind data as measured by radar/balloon technique.....	Seals (animals):
11022	Steller sea lion herds in Alaska, photographic census, 1956-58.....
SCS, <i>see</i> Soil Conservation Service.	13973
Sculpture and statuary:	Seals (vacuum tube):
statue of John Burke—	ceramic-metal seals for high-power tubes.....
acceptance, print proceedings, report.....	18498
13529	Seamen, <i>see</i> Sailors.
place in Statuary Hall, reports.....	Seaplanes, bases, directory, airman's guide supplement.....
8085, 9871, 13528	3604
statue of Joseph Ward—	Seaports, <i>see</i> Ports.
acceptance, print proceedings, report.....	Search for Clittle of Raleigh, archeological excavations at Fort Raleigh National Historic Site, N.C.....
9873	1344
place in Statuary Hall, reports.....	18124
8077, 9872, 13530	Search for extraterrestrial life.....
19087	Search radar, <i>see</i> Radar.
SD series.....	Seas, <i>see</i> Ocean.
2119, 6314, 12039, 19087	Seasons and holidays.....
Sea, <i>see</i> Ocean.	12059
Sea kale, cultivation in China.....	Seat belts, <i>see</i> Automobile seat belts.
14415	Seats:
Sea lions, <i>see</i> Seals (animals).	aircraft, design criteria, crash injury evaluation.....
Sea of Japan, <i>see</i> Japan, Sea of.	13099
Sea urchins:	passenger, installation in H-21 helicopter, test crash injury evaluation.....
papers on Echinoida, etc., National Museum bulletin, title page, etc.....	18351
11114	Seattle, Wash.:
Tertiary echinoids from Caloosahatchee and Tamiami formations, Florida.....	census of housing, 1960, standard metropolitan statistical area, components of inventory change.....
16560	1908
Sea water:	consumer expenditures and income, 1960.....
absorption-multistage flash distillation process.....	7153, 12783
20753	electric facilities of area, map.....
boundary waters, Great Lakes and St. Lawrence River, pilotage services, agreement.....	519, 2266
11320	income, education, and unemployment in neighborhoods.....
chemical analysis, calcium determination, etc.....	10921
604	occupational wage survey—
conversion—	departmental edition.....
isotopes utilization as fuel.....	3032
12246	document edition.....
osmotic process, practicality.....	2019
14057	Seattle World's Fair, U.S. science exhibit, report.....
12245	7814
distillation unit for marine and shore base application, evaluation.....	Seawalls, <i>see</i> Walls.
6577	SEC, <i>see</i> Securities and Exchange Commission.
relation of salt water to fresh ground water (series).....	Secondary education:
12234, 14031	aeronautics and space bibliography.....
removal of scale-forming compounds.....	19885
6578	Clearinghouse Exchange of publications of State departments of education.....
saline water conversion program to develop new source of fresh water.....	17361
624	grants for instructional research, hearings.....
salt water/air interface, effects of impressed electrostatic fields.....	13645
5050	improve quality, hearings.....
12265	13645
Seaboard Air Line RR., accident.....	20085
Seaborg, Glenn T.:	Secondary schools, <i>see</i> High schools.
addresses, etc.—	Secret Service, responsibilities (remarks).....
Jan. 10, 1963.....	11358
Jan. 11, 1963.....	Secretary of Agriculture, <i>see</i> Agriculture Department.
Jan. 16, 1963.....	Secretaries:
Mar. 3, 1963.....	curriculum for manpower development and training program.....
Mar. 16, 1963.....	2162
Apr. 26, 1963.....	opportunities in Budget Bureau.....
Apr. 29, 1963.....	1854
May 3, 1963.....	Sectoral analysis of velocity.....
May 4, 1963.....	2274
May 7, 1963.....	Securities:
June 5, 1963.....	act of 1933—
June 9, 1963.....	amend—
June 17, 1963.....	hearings.....
June 28, 1963.....	13794
July 17, 1963.....	report.....
13249	15352
	releases, SEC.....
	4175

# JANUARY-DECEMBER

	Entry
<b>Securities—Continued</b>	
foreign, interest equalization tax act—	
description and technical explanation	15336
hearings	18962
statement	21148
general rules and regulations under public utility holding company act of 1935	18300
markets, investor protection, special study reports	11753-754, 18798-799
publications, price list	1395
redeemable, list	13936
rules and regulations of SEC under securities act	18301
special market study releases	4292
traded on exchanges	4177, 16553
transactions and holdings	3985
see also Government securities.	
<b>Securities and Exchange Commission:</b>	
appropriations, 1964, hearings	18919
authority over trust powers of national banks by both SEC and Comptroller of Currency—	
hearing	13648
report	13553
companies filing annual reports, directory	9377
decisions and reports	20123
general rules and regulations under—	
public utility holding company act of 1935	18300
securities act of 1933	18301
securities exchange act of 1934	18302
legislation, 1963—	
hearings	13794
report	15352
news digest	3965
press releases	4093
releases	3317, 3412, 3561, 3769, 3805-6, 3872, 4175-76, 4202, 4208, 4246
report, 1962—	
departmental edition	9376
document edition	7849
rules of practice, rule 3(a), erratum notice	3317
securities markets, investor protection, special study reports	11753-754, 18798-799
statistical bulletin	4297
work	3318
<b>Securities exchanges:</b>	
act of 1934—	
amend—	
hearings	13794
report	15352
companies filing annual reports, directory	9377
general rules and regulations	18302
releases, SEC	3317, 4176
code of Federal regulations	6424
Security, see National security.	
<b>Security and Consular Affairs Bureau,</b>	
change name to Consular and Migration Affairs Bureau, reports	15282, 15292, 20584
<b>Seddon, J. Carl:</b>	
model of quiet ionosphere	5605
single station doppler-interferometer rocket tracking technique	3123
<b>Sedimentary rocks:</b>	
marine evaporites, geochemistry data	5024
nondetrital siliceous sediments, geochemistry data	2351
porosity and bulk density	17525
<b>Sedimentation and deposition:</b>	
alluvial river channels, tentative classification	19305

	Entry
<b>Sedimentation and deposition—Con.</b>	
Arkansas River, conditions at typical lock and dam, hydraulic model investigation	15457
determination of sediment density by gamma attenuation	1628
environment of calcium carbonate deposition west of Andros Island, Bahamas	604
erosion and sedimentation in semi-arid environment (series)	19310
fluvial sediments, distribution, discharge, etc.	19301
Interagency sedimentation project, summary of work	14051
littoral studies near San Francisco using tracer techniques	6359
manganese deposits of Maple and Hovey Mountains area, Maine, lithology and mineralogy	6554
marine evaporites, geochemistry data	5024
measurement and analysis of sediment loads in streams	14049-51
middle Rio Grande, vertical distribution of velocity and suspended sediment	19319
nondetrital siliceous sediments, geochemistry data	2351
pumping samples with alternate suspended-sediment handling systems, investigations	14050
sediment samples from vicinity of Brookhaven National Laboratory, physical properties and mineralogy	17526
sediment transport in alluvial channels (series)	19319
small streams in southern Wisconsin, sediment characteristics, 1954-59	8355
suspended-sediment concentrations, differential-pressure gauges for measuring, investigations	14049
uptake and transport of radionuclides by stream sediments	10292
wheat quality measure, 1962 crop	4363
see also Silt.	
<b>Sedimentation Laboratory, USDA, research program</b>	1714
<b>Sedition:</b>	
wartime act, repeal geographical limitation section—	
hearings	9941
reports	13613
See the West reclaimed	18298
Seed crops, see Crops.	
Seed flax straw, potential for extending its utilization	11431
Seeding, see Forest planting—Sowing.	
Seedlings, hardwood, response to inorganic fertilizer	7471
see also names of plants or trees.	
<b>Seeds:</b>	
black cherry, effect of pre-germination treatment	17498
downward movement on road fills, determining	13985
Federal seed act, questions and answers	13143
field, acreage, yield, production, etc., U.S. crop years 1951-62	3365
foreign trade prospects	10208
forest tree—	
crop averages fair in Lake States, 1962	12173
seed lot information, recording system in California	17486
prices paid by farmers, spring averages, 1926-61, etc.	7582
quarantine, proposed amendment, hearings	6182
regulations under Federal seed act, service and regulatory announcements	18387

# INDEX 1963

	Entry		Entry
Seeds—Continued		Selling to military	19086
sampling, guide to U.S. customs		Selling to NASA	11087
inspectors	13149	Sells, S. B., military small group per-	
seed crops—		formance under isolation and	
acreage, yield, production, etc.	3368	stress	1762-66
forecast	4178	Seltzer, George, small business and	
prices	4179	union-wide bargaining	1470
stocks report	4180	Semicircular canals, sensitivity to	
stored in cones of jack pine stands,		stimulation during weightless-	
Minnesota	6514	ness	7636
see also names of plants.		Semiconductors:	
Seeley, James F.:		detector, pulse-height response to	
basic data on economy of Morocco	8378	protons, experimental calibra-	
living conditions in Morocco	10336	tion	11514
Seeley, Leonard C., sequential item		device circuits, Navy aeronautical	
text, exploratory study	18559	electronic equipment handbook,	
Segregation, see Race problems.		supp.	16465
Segregation of copper ores by direct-		devices, fabrication by neutron	
firing methods	10950	transmutation doping	7704
Selb, Roswitha, relief	6224	physical properties, investigation	1779
Selbie, Charles M., mechanical sta-		polycrystalline many valley, gal-	
bility and trim augmentation	13100	vanomagnetic effects	19913
on helicopter IFR capability	5129	polar, apparatus for measurement	
Seidel, Harry, trial in East Germany	15576	of transport properties	9173
Seidel, Kenneth W., germination of		resistive element, report	13041
treated shortleaf pine seed		semiconducting compounds for ther-	
Seliff, Alvin, determining characteris-		moelectric power generation	7486
tics of atmospheres of Mars		silicon, failure mechanisms	11513
and Venus from gas-dynamic		Semiotics, gnoseological theory of	
behavior of probe vehicle	9184	Charles W. Morris, USSR	
Seigel, Victor, America in space, first		study	10471
5 years	19901	Senate:	
Selm, H. J., ion exchange separa-		appropriations, 1964, legislative—	
tion and instrumental analysis		hearings	13791
of impurities in rare-earth		report	13750
metals	1237	authority to originate appropriation	
Selnes, see Fish nets.		bills	9959
Seismic and gravity surveys of Naval		calendar, executive	3862
Petroleum Reserve No. 4 and		calendar of business	3546
adjoining areas, Alaska	5020	cloture rule, present rules, history,	
Seismic waves, see Tsunami (tidal		etc.	17194
wave).		committee staffing survey	9958
Seismographs:		delegations to 2d meeting of Mexico	
electrodynamics, transient effects,		United States Interparliamen-	
considering seismic amplifier		tary Group, report	2093
input, USSR study	6686	journal, 87th Cong., 2d sess.	
increased sensitivity, characteris-		manual	9953
tics	2986	officers, employees, etc., investigate	
Seismology:		financial or business interests,	
Antarctic seismological bulletin	3456	expenses, report	20600
full-field seismic modelling	18450	rules and procedures, amend-	
physics of earthquakes and explo-		ments—	
sions, USSR studies	16099	hearings	17334
seismic effects from high yield nu-		reports	17298-299
clear cratering experiment in		rules of procedure, revised edition,	
desert alluvium	11573	print—	
seismic velocity study	11580	law	20436
seismological bulletin	4181	reports	19023, 20467
spectra of ocean waves and micro-		secretary, report 1962	6214
seisms as related to storms at		standing rules, amend, report	19010
sea	11164	telephone directory	310, 8017, 18963
see also Earthquakes.		youth program, continue, report	11958
Seltz quadrangle, Ky., coal geology	598	Senate bills	2068,
Selecting fertilizers for lawns and		4762, 6211, 8018, 9953, 11917,	
gardens	9571	13673, 15340, 17190, 18964,	
Selective service, see Conscription.		20508	
Selective service regulations, see Se-		Senate documents	311-323,
lective Service System.		2069-81, 4763-72, 6212-16,	
Selective Service System:		8019-23, 9954-60, 11918-922,	
appropriations, 1964, hearings	18919	13674, 15341-344, 17191-199,	
regulations	4188	18965-968, 20509-510	
report, 1962	5714	Senate executive documents	8024-25,
Selenium:		11923-924, 13675, 20511-526	
in oxidized sandstone-type uranium		Senate executive reports	18969-971,
deposits	6552	20527-546	
report, quarterly	4189	Senate reports:	
Self-determination, right of, in So-		private bills	6217-29,
viet Union	16175	8026-45, 9961-62, 11925-946,	
Sellgsberger, Ludwig, rapid sole		13676-697, 17199-239, 18972-	
leather tannage using domestic		19006, 20547-570	
materials	9369	public bills	2082-83,
Selling, see Mail-order business—		6230-86, 8046-87, 9963-92,	
Salesmen and salesmanship.		11947-12002, 13698-788, 15345-	
Selling to AEC	13252	371, 17240-300, 19007-40,	
		20571-602	

# JANUARY-DECEMBER

Entry	Entry
Senegal:	Serologists, examination announce-
exports and imports, licensing and	ment ----- 9743
exchange controls ----- 6612	Serology:
fishery developments ----- 15524	laboratory procedures for syphilis ----- 3291
investment law ----- 5073	serological response to thermal
Senior citizens, <i>see</i> Aged.	burns, USSR study ----- 8903
Sewer pest, <i>see</i> Stinkbugs.	<i>see also</i> Serum and serumtherapy.
Sense organs:	Serpentine, Garnet Ridge, Monument
perception problems and phenome-	Valley area ----- 12220
non of attunement, USSR	Serra, Junipero:
study ----- 14164	anniversary medal—
research advances in neurological	law ----- 18784
and sensory disorders ----- 1338	reports ----- 13728, 18849
sensory deprivation, pain and per-	Serum and serumtherapy:
sonality relationships for space	blood serum, lipid and lipoprotein
travel, study ----- 18166	concentrations, Military Acad-
sensory disease—	emy graduates, 1952-60 ----- 13217
film guide ----- 16514	changes in serum lipid concentra-
mental retardation activities ----- 20108	tions with age in young men ----- 9628
Sensitization, brain during serum	extraction apparatus for determina-
course, spontaneous bioelectric	tion of total serum lipids ----- 4420
activity changes, USSR study ----- 15784	luminescent-serological method of
Sensors, balloon wind, dynamic re-	detection of antibodies against
sponse of rising and falling	Rickettsia prowazeki, USSR
with application to estimates	study ----- 14140
of wind loads on launch ve-	luminescent serum—
hicles ----- 20981	use for rapid diagnosis of dysen-
Sensory physiology, <i>see</i> Physiology.	tery, USSR study ----- 14122
Separation processes:	USSR study ----- 14338
application of distillation tech-	paragglutinating E. coli strains
niques to radiochemical separa-	ability to stain by fluorescent
tions ----- 16849	sera of different specificity,
cobalt and nickel, separation and	USSR study ----- 12370
recovery by solvent extraction	serum sensitization of brain,
and electrorefining ----- 5486, 9118	changes in spontaneous bioelec-
Separators, <i>see</i> Cyclone coal washer.	tric activity, USSR study ----- 15784
Septal and hypothalamic stimulation	Servants:
of unanesthetized cats ----- 11490	domestic workers paid \$50 in wages
Septic tanks:	in 3 months earn social secu-
care, general information ----- 16503	rity ----- 20134
systems for low-cost homes ----- 13914	private household workers employ-
Sequential tests, item, exploratory	ment, estimating, handbook ----- 19126
study ----- 18559	social security—
Sequestrants, effect on yttrium be-	good news for household work-
havior in rare-earth-amine ex-	ers ----- 9306
traction systems ----- 12838	household employer's guide ----- 626
Sequola, giant, silvical character-	Serve and explore with Coast and
istics ----- 8299	Geodetic Survey ----- 13333
Sequola National Park:	Service and regulatory announce-
general information ----- 5644	ments, Agricultural Marketing
land for hydroelectric project, con-	Service ----- 9534-35, 18387
tinue use—	Service industries, East European,
law ----- 13421	translations ----- 743,
reports ----- 7926, 12001	769, 855, 911, 918, 943, 1046,
map ----- 7337	1080, 2497, 2564, 2612, 2767,
Serbia, Materials Examination Insti-	2798, 2895, 2910, 2938, 2961,
tute, Yugoslav study ----- 15785	5136, 5180, 5196, 5201, 5224,
Serenkov, G. P., nucleic acids and	5328, 5412, 6709, 6720, 6830,
evolution in algae ----- 18516	6844, 6862, 6980, 7015, 7038,
Seresly, Amalia, relief ----- 11932	7086, 8466, 8480, 8506, 8553,
Sergeant, Russell L., concurrent re-	8605, 8689, 8733, 8768, 8877,
petition of word flow, intelli-	8901, 8926, 8972, 9001, 10363,
gibility factors and scores ----- 9099	10393, 10456, 10484, 10649,
Serial set (congressional) ----- 207,	10672, 10700, 10710, 10878,
1964-67, 4660-63, 6060-61,	12278, 12294-296, 12512, 12518,
7819-20, 9799-9802, 11705-707,	12523, 12531, 12630, 12719,
13388-390, 15139-141, 16971-	12731, 14114, 14180, 14220,
972, 18768-769, 20394	14237, 14352, 14406, 15729,
Serials:	15772, 15851, 15922, 15934,
copyrighted, catalog of copyright	15974, 15990, 16053, 16092,
entries ----- 338, 12031	16116, 16164, 16258, 17573,
indexed in bibliography of agricul-	17610, 17637, 17759, 17822,
ture ----- 11092	17871, 17895, 17913, 19432,
JPRS reports, publication notice ----- 19772	19512, 19589, 19630, 19642,
new serial titles—	19668, 19755, 20766, 20862
alphabetical arrangement ----- 3962	Service medals, <i>see</i> Medals.
classed subject arrangement ----- 3961	Service schools, <i>see</i> Military educa-
3d series, 1962 cumulation ----- 14487	tion—Naval education.
Soviet Union scientific and techni-	Service-station attendants automo-
cal serial publications, 1945-	bile, testing and training pro-
60 ----- 19813	grams ----- 2176

# INDEX 1963

Entry	Entry
Service stations: automobile, testing and training programs for better workers... gasoline, employee earnings, June 1961.....	Seward Peninsula, beryllium de- posits.....
2176	19306
3028	Sewall, Winifred, drug literature sur- vey.....
2012	17311
Service trades: census of business, 1958, Puerto Rico.....	Sewage, <i>see</i> Sewage.
13303	Sewers, <i>see</i> Sewage.
1188	Sewing, industry, enterprises, how to compute production, USSR study.....
3654	8633
16646	Seychelles, plant quarantine import requirements.....
16917	13160
13186	Seymour, William R., appraisal of frozen food locker coopera- tives.....
1865	19158
7363	Seymour, Conn., four-town redevelop- ment area, ARA case book.....
7364	20317
20323	551
15593	Shadow Mountain National Recreation Area, general information.....
8499	18210
10338	Shaft sinking, methods and costs, Project Gnome.....
5071	20949
18507	Shafts, rotating, magnetic and elec- tric forces for suspension, in- vestigation.....
4422	7593
16805	Shahinlan, P., creep-rupture of nickel.....
1757	11187
15489	Shale: bituminous, decaneerogenization of products, USSR study.....
19141	2557
4327	Paleozoic, from borings in Florida, petrography.....
16872	15613
427	<i>see also</i> Oil shale.
17408	Shallau, Con H., small forest owner- ship in urban fringe area of Michigan.....
13026	574
11248	Shalowitz, Aaron L., shore and sea boundaries, with special refer- ence to interpretation and use of Coast and Geodetic Survey data.....
20110	198
3655	Shambon, Arthur, energy dependence determinations in 60-180 Key range with X-ray machine of varying output.....
20111	11558
16523	Shands, W. A., controlling potato in- sects.....
13027	9570
18473	Shanghai, China, description.....
17813	992
	Shanklin, Edward H.: cotton spinning performance test, evaluation.....
	1617
	effects of cotton ginning practices on market quality of cotton, Mississippi Delta variety, 1958-59.....
	4360
	Shanks, E. Baylis: mathematical treatment of deter- mining eigenvalues associated with partition function of atom in interior of plasma.....
	20977
	recursion relation associated with certain special type determin- ant.....
	9144
	Shanks, Robert E.: dynamic stability of towed para- wing glider model.....
	7271
	static, etc., stability derivatives of flat-plate wings.....
	14564
	Shannon, Ira L.: corticosteroids in human parotid fluid following oral hydrocorti- sone dosage.....
	9631
	effect of pyrophosphates on labora- tory performance of topically applied aqueous stannous fluo- ride.....
	79
	In vitro performance of stannous fluoride prophylaxis paste and topical solution, etc.....
	4416
	laboratory performance of low con- centration aqueous stannous fluoride prophylaxis pastes.....
	73
	parotid fluid steroid responses to graded doses of corticotropin.....
	14922



	Entry
Shannon, Ira L.—Continued	
stress in dental patients—	
adrenocortical responses, etc.	7639
effect of local anesthetic procedures	13218
effect of time of day on adrenocortical response to oral surgery	75
Shape up, new program of exercises to build fitness right at your desk	19996
Shapers (tools):	
spindle guard makes shaper safer, more efficient	13984
Shapes (metal):	
Federal item identification guides for supply cataloging, supplements	3655
Shapiro, M. M., primary cosmic radiation	18241
Sharble, Elfriede U., relief	18824
Sharp, Earl D., torque exertable on knobs	7604
Sharp, Laure M., two years after college degree	16448
Sharp, William N., geology and thorium-bearing deposits of Lemhi Pass area, etc.	6548
Sharpe, Lake:	
naming—	
law	17028
reports	13630, 13706
Sharpe General Depot, Lathrop, Calif., airfield construction projects, hearings	15310
Shasta Dam, keystone for Central Valley project, general information	16551
Shaw, Byron T., address, Oct. 3, 1962	1662
Shaw, C. Scott, cottonseed handling at gins	5840
Shaw, David S., effects of nose bluntness, etc., on static aerodynamic characteristics of blunt bodies	11058
Shaw, Edward L., laboratory experiments in radiation biology	15015
Shaw, Lawrence H., measuring effects of weather on agricultural output	2125
Shaw, Lawrence W., reported tuberculosis data	3297
Shea, Richard, dynamic stress concentration factors	18265
Shearing stresses, see Strains and stresses.	
Sheds, hay storage and feeding, farm building plan	13183
Sheep:	
activities on crested wheatgrass lambing range	4985
bluetongue incidence, reported in U.S., 1962	14843
on feed—	
Jan. 1, 1963	7464
Mar. 1, 1963	11341
prices received by farmers, U.S. and States, 1960-61	5844
scabies eradication—	
activities, report, 1962	1621
inspections by counties, 1962, map	1660
Indiana concentration in dipping vats, failure to maintain	5801
outbreaks, reported	5800, 5808
progress, maps	1659, 5807, 1661
training schools	5806
scrapie slaughter program, compensate owners, hearing	17158
stocker and feeder, shipments	4190, 9448
Sheep ranges, see Range lands.	
Sheet glass, see Glass.	

	Entry
Sheet-material, high-strength, for rocket motor casings, resistance to crack propagation	3224
Sheet metal:	
Federal item identification guides for supply cataloging, supplements	3655
forming technology, literature survey	9600
pressed bends, forms, seams, and joints, identification, Federal standard	13942
stress gradient and stress biaxiality effect on behavior of materials	7602
Sheeting, cotton, workers' petition for adjustment assistance, Tariff Commission report	14740
Sheets, current industrial reports	13296
Shelburne Harbor Ship & Marine Construction Co., Inc., relief	13516
Shelby County, Tenn., immunization status of 2-year olds	16509
Sheldon National Antelope Refuge, birds	12138
Shell ventilation systems for potato storages in fall crop area	5826
Shellfish:	
growing areas, sanitation manual	3277
harvesting and processing, sanitation manual	1403
hatcheries and their future	13956
interstate shippers, cooperative program for certification	1403, 3277
Maryland landings, annual summary, 1962	19222
Mississippi landings, annual summary, 1962	20683
New York landings, annual summary, 1962	12130
Oregon landings, annual summary, 1962	19223
processing industry, Atlantic and Gulf Coasts, hourly earnings	9064
sanitary practices in processing for shipment, agreement with Japan	3355
shippers, list	3506
Shells (aircraft):	
cylindrical effect of initial imperfections on buckling stress	16410
flexible, theory, survey of investigations, 1941-57	21012
Shells (ordnance):	
loaded shot, simplified practice recommendation	9708
Shells (structural):	
elastic, statistical methods in non-linear theory	1319
pressurized, elastic stress distributions for cylinder-to-hemisphere and cone-to-sphere junctions	5587
Shelter belts:	
growth response of some shelterbelt species following sod removal	15568
tree planters' notes	2316-17, 6527, 8307, 10250, 20712
Shelterbelts, see Shelter belts.	
Shelters (protective), see Protective shelters.	
Shelton, John E.: mercury, minerals yearbook chapter	14503
tin, minerals yearbook chapter	19881
Shelton, L. R., Jr., bacteriological survey of frozen precooked food industry	2304
Shen Chou, art, 1427-1509, study	583
Shenandoah National Park, general information	11123
Sheng, Chang, see Sing, Jeung.	
Shepard, Harold H.:	
fertilizer situation for 1962-63	11445
pesticide situation for 1962-63	16725

# INDEX 1963

	Entry
Shepherd, C. M., primary and secondary cells, battery discharge equation	18244
Sheppard, Harold L.: remarks	
Dec. 18-20, 1962	1788
Jan. 23, 1963	1786
Sheridan, Eugene T.: fuel briquets and packaged fuel, minerals yearbook chapter	16321
peat, minerals yearbook chapter	19855
Sheridan, William H., gaps in State programs for juvenile offenders	1925
Sheridan, William L., waterflow through salmon spawning riffle in southeastern Alaska	6463
Sherlock, Dulcie A. S., relief	17210
Sherman, May: drugs and heart disease, review of NIH research grants	19961-962
smoking and heart disease, review of NIH research grants	18197
Sherman County, Tex., natural gas, low temperature phase equilibria	3099
Sherwood, R. K., licensing and exchange controls of Senegal	6612
Shibler, Bertram K., fluidized-bed reactor	9134
Shielding: factors and atomic polarizabilities, interference, of internal combustion engines	18120
catalog	9521
installation, etc., handbook	9520
Shigo, Alex L.: beech bark disease	4981
fungus and insect injury to yellow birch seeds and seedlings	20707
Shillito, Thomas B., effect of pressure level on afterburner-wall temperatures	5527
Shiloh National Military Park, general information	7338
Shimkin, Demitri B., Soviet mineral-fuels industries, 1928-58, statistical survey	6006
Shingle Creek Basin: engineer report	2183
departmental edition	2073
document edition	2073
Shingles, red cedar, current industrial reports	15065
Ship pilots, Panama Canal, civil service annuities, hearing	9946
Ship Structure Committee: annual report, 1962	1442
serial no. SSC	5715
9379, 14686, 16556, 18304	20124
Shipbuilding: and conversion program, 1964	11142
construction differential subsidy—reimbursement to operators of extra expenses	
hearings	17177
reports	15255, 17284
reimbursement to shipowner for certain excess expenses, hearing	13798
design costs of unbuilt vessels, hearings	297
relative cost in various coastal districts of U.S., report to Congress	16314
Socialist nations production after World War II	2076
sound-insulating capability of ship hull structures, USSR study	15953
trawlers, stern-ramp, construction, hearings	12011
wood— boat and ship construction techniques, manual	11265

	Entry
Shipbuilding—Continued wood—Continued technical data applicable to boat and ship design, manual	11264
Shipments: AID-financed authorization awards	3431
Florida grapefruit from Tampa to Hamburg, Germany, October test	9533
freight to N. Vietnam, N. Korea, Communist China, and Mongolia, international regulations, Austrian study	19421
fruits and vegetables, tables of carlot conversion factors, supp.	1619
Government, loss and damage prevention, sharing responsibility	7480
lumber to Puerto Rico, Secretary of Commerce to suspend for 2 years requirement for exclusive use of U.S. vessels, report	20573
manufactures, value, 1962	18641
marking, military standard	2115
preparing shipments to— Angola	8419
Denmark	6587
East Africa	8380
Federal Republic of Germany and West Berlin	5072
Federation of Rhodesia and Nyasaland	2394
Finland	5084
Ghana	10340
Hong Kong	8392
Iceland	2429
Mauritania	5079
Morocco	6618
Saudi Arabia	5071
Tunisia	8418
Viet-Nam	5066
tariff filing requirements, exclude lumber cargoes	
law	17033
reports	13699, 15268
see also names or classes of articles shipped.	
Shippers, interstate shellfish, cooperative program for certification	1403, 3277
Shipping: act of 1916, amend— law	17033
reports	13699, 15268
cargo preference act, provisions affecting sale of agriculture surplus, opinion of Attorney General	20923
code of Federal regulations	4904, 13930, 13933
supplement	13933
dry cargo service and area report, shipping companies, etc.	3048
foreign trade— summary reports, monthly	4258
waterborne, statistics, monthly report	4267
intercoastal act of 1933, amend, hearings	297
maritime regulations and expansion (remarks)	10158
maritime services, radio stations on land, shipboard, etc., FCC rules and regulations	6398, 10119
more cargo for U.S. ships (remarks)	10930
nonapplicability of foreign dredge act to Virgin Islands, opinion of Attorney General	19774
radioactive material, packaging and regulatory standards, AEC, symposium, summary report	7710
regulations, foreign trade (remarks)	4901

	Entry
Shipping—Continued	
St. Lawrence Seaway, changing patterns with emphasis on grain exports	14873
selling American services (remarks)	10931
USSR, Far East, history	12487
west coast maritime strike impact, report	18056
see also Transportation—Water carriers.	
Shipping conferences:	
dual-rate contracts, problems of regulation (remarks)-----	505
operation, extend law-----	
law-----	7824
report-----	8047
regulations, foreign trade (remarks)	4901
Shipping containers, see Containers.	
Ships:	
activation manual-----	21055
American, greater employment through cargo development (remarks)	10931
cargo and miscellaneous vessels, Coast Guard rules and regulations	7802
construction, see, in main alphabet, Shipbuilding.	
construction-subsidized—	
amend contracts-----	
hearings-----	17177
report-----	17272
war-risk insurance, coverage, remove certain limitations-----	
hearings-----	17177
report-----	19013
Defense Dept. military procurement appropriations, 1964-----	
hearings-----	6187, 8092, 11873
law-----	11720
reports-----	6142, 6161, 8073, 9902
electrical systems, Navy-----	1369
electronic equipment maintainability design criteria, handbook for designers-----	1443
fouling in Soviet waters of Sea of Japan-----	15679
furnishing of certain supplies and services to naval vessels, agreement with Australia-----	11329
grant of vessels, agreement with Japan-----	1521
inspection, laws governing-----	7799
loan to, agreement with-----	
Federal Republic of Germany, extension-----	1549
Korea-----	11317
Norway, extension-----	9424
Pakistan-----	9425, 16610
manning of vessels, rules and regulations-----	7803
MarAd surface effect, economic potential (paper)-----	9095
mariner-class, loading-----	7362
merchant, application of consolidated nuclear steam generator-----	5923
merchant fleets of world, seagoing steam and motor, 1000 gross tons and over-----	12818
merchant ships, privately operated U.S. flag, seafaring premium pay-----	16315
merchant vessels-----	
Atlantic, report system-----	11676
equipment, Coast Guard approved lists-----	4639
extend life from 20 to 25 years, amend law, hearing-----	13798
United States, 1963-----	
departmental edition-----	17338
document edition-----	17066

	Entry
Ships—Continued	
nautical schools, public and civilian vessels, Coast Guard rules and regulations-----	11679
naval, USS Canopus, disposal of, agreement with Philippines-----	1537
Navy landing party manual, 1960 change-----	1365
noise and sonic vibration control, USSR study-----	8536
operating under bridges over navigable waters, approve certain practices-----	
law-----	20444
reports-----	11836, 19031
ore carriers and ore/oil carriers in world fleet, 1962-----	16313
ownership changes, supp. to merchant vessels of U.S.-----	3927
requisitioned by Government, owner preference in reacquiring, hearings-----	17177
sanitation of vessels in operation, handbook-----	20096
self-exciting synchronous generators, USSR study-----	5144
ships and marine equipment, Federal item identification guides for supply cataloging, supplements-----	3660
spare parts increased costs resulting from failure to procure competitively directly from manufacturer, Navy Dept., GAO report-----	17509
stresses and accelerations at sea, unmanned system of recording, U.S. flag, selling their use to American shippers (remarks)-----	16556
undocumented, rules and regulations for numbering-----	10930
vessel entrances and clearances, summary report, 1962-----	11680
wages, hours of work on board, and manning of vessels recommendations adopted at ILO convention, text-----	13308
20526	
Ships, see also Fishing vessels—Hulls (ships)—Merchant marine—Merchant ships—Nuclear powered ships—Shipbuilding—Warships—also names of ships.	
Ships Bureau:	
Journal-----	3485
shop practice suggestions-----	13258
Ship's serviceman, see Navy.	
Shipyards:	
shop practice suggestions-----	13258
straight-time hourly earnings, indexes of change, monthly-----	3781
Shirley, Lawrence E.:	
mineral industry of Florida-----	1212
mineral industry of South Carolina-----	19854
Shiskin, Julius, tests and revisions of Bureau of Census methods of seasonal adjustments-----	16906
Shivering:	
activation and suppression during septal and hypothalamic stimulation-----	11492
anti- and pseudo-Parkinson drugs effects in cats-----	11493
decerebration and decortication effects in cat-----	11491
effect of hypoxia-----	11495
hypothalamus anatomy-----	11489
nervous control, review of literature-----	18468
relationship to temperature regulation-----	18469
septal and hypothalamic lesions effects in cats-----	11494

# INDEX 1963

	Entry	Entry
Shivering—Continued		
septal and hypothalamic stimulation of unanesthetized cats	11490	
Shivers, James P., hovering characteristics of rotor having airfoil section designed for utility type of helicopter	1307	
Shjello, J. B., current studies of hydrology of prairie potholes	12227	
Shock (biological):		
traumatic, pretreatment with adrenocorticotrophic hormone, protective effects	14919	
see also Electric shock.		
Shock (mechanical):		
flight, and vibration data of Echo A-12 application vertical tests	19923	
AVT-1 and AVT-2		
testing, mechanical impedance simulation	16389	
Shock absorbers, yielding-metal, winged reentry vehicle landing gear, landing characteristics	1294	
Shock tubes:		
BRL, piezo-electric blast gages	9311	
electromagnetic, generating strong shocks in air, evaluation	19925	
Shock waves:		
bow shock of blunt body in Mach no. 6 free stream, effect of forward-facing jet	7264	
in-flight pressure measurements above and below bomber airplane at Mach nos. 1.42 to 1.69	20990	
nonequilibrium flow field behind normal shock waves in carbon dioxide	14571	
normal, thermodynamic properties of carbon-dioxide and nitrogen mixtures behind	7257	
spatial non-stationary motions of solid medium penetration	1825	
transverse, rate of liquid jet breakup	11048	
two-dimensional bodies, center-line pressure distributions for detachment at Mach number 6 and angles of attack up to 25°	14556	
underwater, formation by exploding wires	18242	
vibrations from instantaneous and millisecond-delayed quarry blasts	5479	
see also Sonic boom.		
Shoes, see Boots and shoes.		
Shonto, study of role of trader in modern Navaho community:		
departmental edition	16812	
document edition	17059	
Shoop, Lucille T., endocarditis, bibliography, 1957-62	21081	
Shooting, small arms ranges, Air Force Manual	9608	
Shopper's guide to U.S. grades for food	1697	
Shopping centers:		
financing through SBA loans to State and local development companies	11269	
suburban, bibliography	18308	
Shops, see Machine shops.		
Shore, Charles P., experimental pressures and turbulent heat-transfer coefficients, etc.	9161	
Shore and sea boundaries	198	
Shoreline areas:		
preservation for public use and benefit, hearings	13811	
recreational resources, preservation of Assateague Island as national seashore (remarks)	20751	
Short Mountain Lock and Dam and Reservoir:		
rename as Robert S. Kerr Lock and Dam—		
hearings	13667	
law	13436	
reports	9860, 13710	
Shorter, Herbert B., sr., relief	7905, 18996, 20410	
Shortleaf pine, see Pine.		
Shoshone County, Idaho, rock drilling at Silver Summit Mine, Hecla Mining Co.	10937	
Shotguns, loaded shot shells, simplified practice recommendations	9708	
Shotts, Reynold Q., Alabama coals, research and technologic work, bibliography	19837	
Shovels, crane, improvident disposal, Army Dept. modernization program, GAO review	6533	
Shrager, Jack J., vehicular measurements of effective runway friction	9456	
Shreveport, La., Greater Shreveport Municipal Airport, weather observations, hourly, decennial census	13122	
Shrews, ecology of genus Sorex of western Siberia, USSR study	7031	
Shrimps:		
conservation, convention with Cuba, text, report	20529	
fisheries in Guatemala, El Salvador, and Nicaragua, survey	2292	
frozen raw breaded, determination of breeding percentages, accuracy of official method	19229	
Galveston Biological Laboratory, research 1962	13955	
Gulf States canning industry	13960	
landings	4191	
1959 summary	4935	
1962 summary	17445	
Maine landings, fluctuations	15519	
radiation pasteurization	11568	
Shultz, John F., carbides, nitrides, and carbonitrides of iron as catalysts in Fischer-Tropsch synthesis	19824	
Shurcliff, Alice W., labor law and practice in Ceylon	7142	
Shugars, Owen K., commercial tobacco farms, Coastal Plain, North Carolina	12045	
Slahaya, Odo, digital readout technique for aerospace medical monitoring of physiologic data	7635	
Sla Pueblo:		
American Ethnology Bureau bulletin—		
departmental edition	4428	
document edition	4670	
Slat, Purification, relief	6218	
Siberia:		
Academy of Sciences, USSR, Siberian Department, accomplishments	15725	
east coast, sailing directions, charge	7352	
geological studies, USSR	19650	
geophysical research	12353	
southeast coast, sailing directions, change	12939	
topographers conference	2552	
western, ecology of shrews (genus Sorex), USSR study	7031	
Sick:		
acute conditions, incidence and associated disability, U.S., July 1961-June 1962	14675	
children's illness, national health survey data	20367	

	Entry		Entry
<b>Sick—Continued</b>		<b>Signal systems:</b>	
disability days due to injury, U.S. statistics, July 1959-June 1961	5687	Federal item identification guides for supply cataloging, supplements	3656
family income in relation to disability days, hospital discharges, etc., United States	16538	long distance transmission of information, prerequisite for efficient data processing, East German study	2904
financial protection for Federal employees	16946	Signalmen, 1 & C, Navy training course	9269
publications, price list	1397	<b>Signals:</b>	
working with sick and disabled, sketches	19157	battalion, armored, mechanized, and infantry divisions, field manual, changes	9652
Sick leave, <i>see</i> Leave of absence		orders, records and reports, field manual	9654
Siderite, magnetic susceptibility	10957	smoke and illumination, submarine, handling and operation instructions	7372
<b>Siding:</b>		warning, vibrotactile, comparative evaluation	1769
asphalt and tar, current industrial reports	3574	<i>see also</i> Radio signals—Telemetering signals	
summary, 1962	11616	Signorelli, Robert A., erosion resistance, etc., of nozzle materials in small solid-propellant rocket engine	5603
wood, drop, water repellents improve performance	19265	Sihanouk, Norodom, analysis of Cambodia's relations with its neighbors	8896
Siegel, Davey E. S., relief	13519	Sikich, Matthew G., mineral industry of Illinois	1213
Siegel, Gordon S., periodic health examinations, abstracts from literature	13020	Silage, use of microorganisms in production, USSR studies	17619
Siegel, Michael H., discrimination of color, psychophysical methods	9105	<b>Silica:</b>	
Siegenite, flotation in complex sulfide table middling from southeast Missouri	5475	anionic flotation from goethite iron-bearing materials, Cuyuna Range, Minn.	9128
Siegfried Line Campaign	12819	content of rocks, nondetrital siliceous sediments, geochemistry data	2351
Siemoneit, Hans-Dieter, relief	17078	solid solubility in magnesium, effect of indium	5496
<b>Sierra Leone:</b>		Silicates, synthesis of fibrous silicon carbide by thermal reduction	10953
economy, basic data	2423	<b>Silicon:</b>	
official publications, bibliography	19610	compounds, synthesis of fibrous silicon carbide by thermal reduction	10953
sending gift packages to	2414	germanium thermoelectric modules for Transportation Corps silent boat design, optimization	16633
<b>Sierra Nevada Mountains:</b>		high-purity, mineral industry survey, quarterly	4192
canyon physiography, relation to incidence of blister rust	2314	kinetics of oxidation in Mo-Si system	7589
southern California, geology of Mount Pinchot quadrangle	10283	low alloy rails with increased silicon content for Chinese railroads	14284
<b>Sight:</b>		minerals yearbook chapter	18105
eye test for glaucoma, protective assurance of vision	11240	organic and non-silicate silicon chemistry, 2d symposium, Dresden, East Germany	14399
glaucoma and its effect on eyesight	11233	range-energy relations for protons and electrons in SiO <sub>2</sub>	12952
human pilots' ability to detect angular motion with application to control of space rendezvous	1296	rare metal alloys, radio and electrical applications, USSR study	6832
optical services, medical care in public assistance, guides, etc.	8201	resistive material	13041
photostress test for evaluation of macular function	16805	semiconductors, failure mechanisms	11513
rare phenomena, vision in fingers of Rosa Kuleshova, USSR study	14414	<b>Silicon carbide:</b>	
red-green sensitivity as function of retinal position	9102	fibrous, synthesis by thermal reduction of silicates and silicon compounds	10953
vision-testing devices, comparison	14673	physico-chemical investigations of SiC-B <sub>4</sub> C section of Si-B-C system, USSR study	938
<i>see</i> Color blindness		<b>Silicon oxides, range-energy relations for protons and electrons in SiO<sub>2</sub></b>	12952
<b>Sightseeing tours in Leningrad region and quick trips to northern Russian cities</b>	957	<b>Silicon tetrachloride, refining by rectification, USSR study</b>	17886
<b>Sigma 7, Schirra's 6 orbits, Oct. 3, 1962</b>	3169	<b>Silicones, polymers, production, recent developments, USSR study</b>	19449
<b>Signal Corps, Army:</b>			
Office of Chief Signal Officer, records, preliminary inventories	14596		
operations, theater of operations, field manual	9651		
<b>Signal generators:</b>			
AN/USM-27, etc., test instrument calibration procedure	9283		
constant-amplitude signal generator Tectronix-190A and 190B, Navy calibration program, technical manual	9293		
SG-21A/U or SG-21B/C, Navy calibration program, technical manual	18258		
SG-21/U, instrument calibration procedure, technical manual	18257		
TS-35A/AP, Navy calibration program, technical manual	20009		
<b>Signal lights, <i>see</i> Lights and lighting.</b>			



# INDEX 1963

	Entry		Entry
Silk, woven goods finished, current industrial reports.....	18680	Simplified practice recommendations.....	4555-57, 9708-9, 11599-600, 13267, 18632-633
Sill, Elvin, Jr., automatic data processing, glossary.....	5956	classified list revised Jan. 1, 1963.....	4510
Silos, farm, types, construction, etc.....	18436	Sims, Claude C. hydrophone calibrator.....	21058
Siloxanes, polyorganosil oxanes, USSR articles.....	877	Sims, Paul A., economic geology of Central City district, Gilpin County, Colo.....	19311
Silsby, Norman S., effects of airplane and landing-gear factors on response to runway roughness with application to supersonic transports.....	1292	Simulators: airplane, minimum standards for approval, civil air regulations, amdts.....	10106, 10108
Silt, fine sediment and flow phenomena, effects.....	10295	Ames atmosphere entry, application to determination of ablative properties of materials for ballistic missiles.....	11006
Silver: electrodes, increasing discharge capacity.....	18247	nuclear reactor, development of equipment and instruction manual.....	15014
low concentrations, bacteriological and chemical behavior.....	16522	satellite attitude control system using inertia wheels and magnets, study.....	19930
mine production, report, monthly.....	4193	study of active control system for spinning body.....	3139
minerals yearbook chapter.....	19878	television multiple insertion techniques.....	3217
production and consumption report, 1961.....	10968	see also Flight simulators—Radar simulators.	
production incentives, hearings, appendix.....	2095	Simuliidae, see Flies.	
repeal legislation relating to purchase, etc.—hearings.....	7989, 10003	Stclair, W. C., ground-water conditions in Fernley-Wadsworth area, Churchill, Lyon, Storey and Washoe counties, Nev.....	8351
law.....	11728	Sing, Jeung, relief.....	17083
reports.....	7944, 7963, 9990	Sing, Rafael Chang, see Sing, Jeung.	
United States movements.....	4268	Singapore: economy, basic data.....	8383
Silver (money): Mint Bureau report, 1962.....	10968	living conditions.....	8382
Silver Bell mining district, open-pit copper mining and concentrating methods and costs.....	9113	Sinkiang Province, China: economic aggression of Soviet Union, Nationalist Chinese study.....	6971
Silver Hake, see Hake.		Ulghur Autonomous Region, natural conditions.....	10390
Silver Star: award to members of Armed Forces for gallantry in cold war incidents—		Sintered corundum.....	18519
hearing.....	13638	Sintering: accelerated, in vertical furnaces, USSR study.....	12519
law.....	15156	aluminum powder, use in producing heat-resistant material, USSR study.....	17994
reports.....	13537, 13775	isothermal, of metallic powders under pressure, USSR study.....	8604
Silver Summit Mine, rock drilling, Hecla Mining Co., Shoshone County, Idaho.....	10937	low temperature, fuel rods.....	16847
Silverton, Colo.: south mining area, geology and ore deposits.....	8337	manganese ores stockpiled at Deming, N. Mex., and Wenden, Ariz., studies.....	1242
South Silverton mining area, San Juan County, Colo. (series).....	8337, 10287	niobium powder, USSR study.....	2652
Silvicide, weeding in West Virginia, field trial of tree injector.....	20701	oxide powders and ceramics made from them, investigation.....	9639
Silviculture, see Forests and forestry.		oxides by electrical conductivity method, USSR study.....	8709
Simmonds, F. A.: bleachability of clean fraction from aspen semichemical corrugating pulp.....	19267	sintered aluminum powder, USSR study.....	8546
elements of wood fiber structure and fiber bonding.....	15578	see also Lime-soda sintering.	
Simmonds, James G., in-plane vibrations of flat spinning disk.....	1269	Sinusoidal vibration testing of nonlinear spacecraft structures.....	19910
Simmons, Fred C., logging farm wood crops.....	23	Sloux City, Iowa, Municipal Airport, weather observations, hourly, decennial census.....	20234
Simon, A. C., electrode processes of microscopy, investigation of battery plate conversion to lead dioxide and sponge lead, etc.....	7369	Sloux Falls, S. Dak.: occupational wage survey—departmental edition.....	3034
Simon, Kenneth A., instructional staff in institutions of higher education, projected to 1970-71.....	15432	document edition.....	2021
Simon, Luba S., relief.....	9853	Sloux Indians: Cheyenne River Tribe, South Dakota, lands in trust, permit sale, report.....	13617
Simons, D. B., some effects of fine sediment on flow phenomena.....	10295	Devils Lake Tribe of Fort Totten Indian Reservation, donating land to, report.....	9910
Simons, Howard, we know so shamefully little about the moon.....	16413	life and customs, story of 3 generations.....	19345
Simonson, R. B., optimum methods for primary working of refractory metals.....	7648		

	Entry		Entry
Sioux Indians—Continued		Skis and skiing:	
Rosebud Tribe—		facts about skier market in North-	
placing in trust status certain		eastern U.S.-----	18533
lands, report-----	20576	national forests, America's play-	
sale and exchange of isolated		ground-----	39
tracts of tribal land, report--	9909	skiing injuries-----	14672
<i>see also</i> Oglala Indians.		Sklar, Olga M.F.P., <i>see</i> Ferrer, Olga	
Siphons, principles, artificial-recharge		M.-----	
studies, Grand Prairie region,		Skodje, Marvin T., water supply and	
Ark-----	14032	plumbing cross-connections--	14678
Sipple, Lloyd, arches and burners for		Skolnik, Alfred M.: experience of employee-benefit plans	
oil-fired maple sap evaporators	4341	in 1961-----	7430
SIR series-----	6017	workmen's compensation payments	
Sirons, Janis, lasers for aerospace		and costs, 1961-----	1501
weaponry-----	5852	Skougstad, Marvin W., occurrence	
Sirups, <i>see</i> Maple sirup.		and distribution of strontium	
Site indexes:		in natural water-----	5029
white pine, southern Appalachian		Skovlin, Jon M., cow and calf weight	
plantations-----	6524	trends on mountain summer	
yellow-poplar site index curves--	6520	range-----	10222
Sites:		Skow, Milford L.: barite, minerals yearbook chapter--	18064
paper birch, requirements and		mica-----	
yield-----	576	materials survey-----	5469
reactor, engineering out distance		minerals yearbook chapter, 1209,	19846
factor (remarks)-----	18605	Skull, venous outflow from cranium,	
selection, Army installations emer-		mechanism-----	11085
gency construction-----	434	Skunks, control-----	17463
small manufacturing plant, per-		Sky:	
sonal factors in choosing-----	1461	Rayleigh's data in airglow emis-	
Sitka Magnetic Observatory, magneto-		sion, reexamination-----	16771
grams and hourly values-----	16959	southern sky survey payload-----	7290
Sitka Sound, aircraft accident-----	18709	Skyhook yoke, <i>see</i> Air-to-surface	
Situation (psychology):		pickup,-----	3527
Air Force officer effectiveness, im-		SL series-----	
portance of factors in measure-	66	SL-1, <i>see</i> Reactors (atomic).	
ment-----		Slag:	
Sluslaw River, stability of south		crystals, glass crystal materials,	
jetty, hydraulic model investi-		USSR study-----	655
gation-----	15458	frost heave characteristics of slag-	
Sivo, Joseph N., analog study of des-		fly ash-lime base-course mix-	
cents from lunar orbit-----	3143	tures-----	12086
Sixty books on housing and commu-		iron-blast furnace, minerals year-	
nity planning-----	14040	book chapter-----	18106
Skibitzke, H. E., dispersion in ground		Slash, <i>see</i> Forests and forestry.	
water flowing through hetero-		Slash pine, <i>see</i> Pine.	
geneous materials-----	10288	Slate:	
Skid-rocker landings, <i>see</i> Spacecraft.		Carolina belt, geology-----	15602
Skiing, <i>see</i> Skis and skiing.		manganiferous carbonate, sulfati-	
Skilled laborers, <i>see</i> Labor.		zation in fluidized bed reactor--	16330
Skilled workers, <i>see</i> Labor.		Slaughtering:	
Skin:		commercial livestock slaughter and	
cutaneous stimuli varying in both		meat production, monthly re-	
intensity level and duration,		port-----	3528
absolute identification-----	4502	humane methods, progress report,	
histological changes following hom-		1962-----	11441
oplasty to burns of irradiated		pork on farm-----	7564
rabbits, USSR study-----	2539	Slavin, Albert, accounting practices	
isolated heating on model of burns		in small firms-----	1483
in rabbits, USSR study-----	17892	Slayton, William L.: remarks--	
melanotic tumors-----	6312	Feb. 11, 1963-----	5764
temperatures in man, effects of		Nov. 1, 1963-----	21151
acetylsalicylic acid on normal		Sleeman, William C., Jr., low-speed	
pattern of cold defense-----	18481	investigation of cable tension	
tests for nasal allergy, reliability		and aerodynamic characteris-	
of results of testing 100 air-		tics of parawing and spacecraft	
men-----	7632	combination-----	14584
thermal burns in children, use of		Sleep, curative sleep, USSR study--	7074
amniotic membranes in treat-		Sleeping Bear Dunes National Lake-	
ment, USSR study-----	15739	shore, establish, hearings-----	15388
Skin diseases, dermatitis, caused by		Sleeping Bear Dunes National Lake-	
epoxy resins, preventive meas-		shore Advisory Commission,	
ures-----	18289	establish, hearings-----	15388
Skin friction (aircraft):		Slick Airways, Inc., accident-----	20369
compressible average turbulent,		Slide films, <i>see</i> Filmstrips.	
calculations-----	5612	Slides (glass):	
compressible turbulent-boundary-		microscopic slide sets, medicine,	
layer, comparison of results-----	9187	teaching aids catalog-----	18540
Skinner, G. B.: flame extinguishment, literature		Slimes, <i>see</i> Metallurgical slimes—Mill	
research-----	11470	slimes—Phosphate slimes.	
hydrazine-nitrogen tetroxide reac-		Slip laws, <i>see</i> Law.	
tion-----	11475	Slippers, <i>see</i> Boots and shoes.	

# INDEX 1963

Entry	Entry
Slipstream, <i>see</i> Propellers.	
Slovakia. <i>see</i> Czechoslovakia.	
Sluder, Earl R., white pine provenance study in southern Appalachians.....	12192
Slum clearance, <i>see</i> Slums.	
Slums:	
and social insecurity in U.S., research report.....	14700
clearance—	
local public agency letters.....	3877
urban renewal manual.....	4270
workable programs for community improvement, Fort Worth regional office, HIFA, GAO review.....	2333
urban renewal, questions and answers.....	11369
Slurries, aqueous, of coal and granular materials, bibliography.....	14497
Slurry, gasification of bituminous coal with oxygen in pilot plant equipped for slurry feeding.....	1251
SM series.....	11656, 13319
Smal, Anna, relief.....	18833
Smal, Jan, relief.....	18833
Small arms ranges.....	9608
Small business, <i>see</i> Business.	
Small Business Administration:	
administrator, nomination of Eugene P. Foley, hearing.....	15377
appropriations, 1964—	
hearings.....	11874
report.....	11848
bank-SBA participation loan plans, guide.....	7425
budget, 1964, decrease, proposal.....	4729
business loans, policies, etc.....	11271
development loan program to help your community, prescription for progress.....	5717
directory, small business concerns interested in performing research and development, list.....	11270
efficiency and economy, report.....	7966
Investment Division, reporter.....	4144
key features of SBA's principal lending programs.....	9382
limited loan participation plan.....	20125
loan program, new life for Small-town.....	16559
loans to State and local development companies.....	11269
local development company loan program, how communities have benefited.....	11267
organization and operation—	
hearings.....	20505
report.....	2038
participation loans, handbook.....	21104
press releases.....	4094
programs and services for small business, publications.....	13043
free, currently available.....	9384
sale lists.....	1487, 9383
report, 1962.....	11266
role in area redevelopment.....	9381
SBA and SBIC amendments, 1963, hearings.....	12007
small business investment companies licensed.....	11278, 20129
starting and managing series.....	1491, 3326, 14690
Utah, SBA financial-assistance program.....	1467
workshops for prospective business owners, announcement.....	21103
Small Business, Select Committee on, House:	
committee prints.....	305, 2062-63, 18960
creating, report.....	4734
hearings.....	9949, 15333, 20505-506
Small Business, Select Committee on, House—Continued	
investigations and studies—	
expenses, report.....	6134
small and independent business problems, expenses, report.....	2043
reports.....	2036, 2038-43, 2045, 17119
Small Business, Select Committee on, Senate:	
annual report.....	8055
committee prints, 12029-30, 15402, hearings.....	12028, 13825, 17335
investigations and studies, small and independent business problems, authorization, report.....	6269
reports.....	8055, 9977, 17242
Small Business, White House Committee on, <i>see</i> White House Committee on Small Business.	
Small Claims and Conciliation Branch of District of Columbia Court of General Sessions:	
amend act—	
law.....	17015
reports.....	13624, 13732
Small craft, gale and whole gale warning facilities charts:	
Great Lakes, Huron, Erie and Ontario, 1963.....	13129
Great Lakes, Superior and Michigan, 1963.....	13130
Small manufacturers, <i>see</i> Manufacturers and manufactures.	
Small office automation, bibliography.....	11277
Small plants, <i>see</i> Plants (industrial).	
Small wheat grower and 1964 wheat program.....	7581
Smallenberger, Leroy, relief.....	9844, 13403, 13694
Smelting:	
electric, manganese ores and concentrates.....	3078
electrorefining titanium, electrolytic methods of preparing cell feed.....	5488
electroslag, titanium ingots, USSR study.....	686
metals by electron beam all-purpose device.....	10848
San Manuel Copper Corp., Pinal County, Ariz., errata.....	3053
separation and recovery of cobalt and nickel by solvent extraction and electrorefining.....	5486
silicon tetrachloride and trichlorosilane, high purity refining, USSR study.....	17886
tin, tungsten, and other metals, recovery from tin smelter wastes.....	1245
Smith, Allan F., hydraulic fluids in spontaneous heating of coal.....	10954
Smith, Arthur L., fuel rich hydrogen combustion system.....	10977
Smith, Bryce A., relief.....	18817
Smith, Carroll N., mosquito repellants, factors affecting protection, period.....	13189
Smith, Craig, computer experiments with one-dimensional plasma model.....	18576
Smith, Donald F., thermodynamic properties of strontium chloride and strontium fluoride from 0° to 300° K.....	20971
Smith, Douglas H., metallized teflon capacitors, etc.....	9601, 18449
Smith, F. B., jr.:	
application of time-optimal control theory to launch vehicle regulation.....	11077
logical net mechanization for time-optimal regulation.....	3158
Smith, G. Louis, torques induced by magnetic field on rotating cylinders, etc.....	5613

JANUARY-DECEMBER

	Entry		Entry
Smith, Geoffrey H., relief-----	13474, 16988, 17230	Smithsonian Institution—Continued	
Smith, Gerald R., Project Social Studies, report-----	17385	appropriations, 1964-----	15158
Smith, Hannia S., report on library service for rural people-----	1693	law-----	7939, 11951
Smith, Hyrum M., guidance for children in elementary schools-----	13852	reports-----	1494, 20130
Smith, J. Donald, waterfowl status report, 1962-----	4971	board of regents, annual report-----	221, 18796
Smith, J. Fred, Jr., geology of Capitol Reef area, Utah-----	20732	departmental edition-----	5720
Smith, J. H., design and operation of carbon-14 biosynthesis chamber-----	37	document edition-----	1495
Smith, J. W., wind distributions, Santa Monica, Calif-----	5588	board of regents executive committee report, 1962-----	5720
Smith, John W., oil yields from core and drill-cutting sampling of Green River oil shales-----	19870	brief guide-----	1495
Smith, Lucille M., homemaker services, available help-----	13032	citizen regent, reappointment of Brown, John N.—	9809
Smith, Margaret, fitting coats and suits-----	13167	law-----	6094, 8086
Smith, Maynard E., panel presentation Dec. 11, 1962-----	1422	reports-----	18279
Smith, Norman F., supersonic store interference from forces on wing-fuselage-store configurations, etc-----	12843, 14533, 16359	publications, price list-----	5720
Smith, Orvel E., cross sections of temperature, pressure and density near 80th meridian west-----	11036	report of secretary, 1962-----	3327
Smith, Patsy B., quantitative and qualitative analysis of family Boliuinae-----	12230	Traveling Exhibition Service, Danells in India, catalog-----	3327
Smith, Quentin M., experiment in dental prepayment, Nalsmuth dental plan-----	5684	Smithsonian miscellaneous collection-----	5721, 14695, 16560-561, 21108
Smith, R. V., choking 2-phase flow literature summary and idealized design solutions for hydrogen, nitrogen, oxygen, and refrigerants 12 and 11-----	18191	Smog, see Air pollution.	
Smith, Ralph G., panel presentation Dec. 11, 1962-----	1419	Smoke, signals, submarine, handling and operation instructions-----	7372
Smith, Richard G., living conditions in Greece-----	6592	Smoking:	
Smith, Richard H., volatility and vapor saturation of pine resins-----	19260	and heart disease, research grants, National Heart Institute, 1949-62-----	18197
Smith, Richard J.: atomic energy program, bibliographies-----	18586	effect on output of epinephrine and norepinephrine-----	16804
civil engineering bibliography on design and construction of nuclear facilities-----	4485	Smolak, George R., attitude investigation of can-type flame holder in ram-jet combustor-----	5512
reactor safety, literature search-----	18587	Smuggling:	
Smith, Robert R., war in the Pacific, triumph in the Philippines-----	12820	border, in connection with Columbian peso devaluation, Ecuadorian comments-----	1005
Smith, Robert W., fatigue behavior of materials under strain cycling-----	9152	Ecuador, operations and government control-----	2690
Smith, S. R., talk, Feb. 21, 1963-----	7538	Snake bites, see Venom.	
Smith, Samuel W., relief-----	13510	Snake Creek National Wildlife Refuge, general information-----	10198
Smith, T. Lynn, presentation on Central and South American population growth-----	13663	Snake River:	
Smith, Thomas H., maternal and child health services, 1960-----	4599	Burns Creek Dam and Reservoir, engineer report-----	4837
Smith, Willard G.: wind-tunnel investigations at subsonic and supersonic speeds-----	11007	departmental edition-----	4763
retractable winged re-entry vehicle-----	14528	document edition-----	17183
tailless fighter airplane model, etc-----	14528	Burns Creek Dam project, hearings-----	17183
Smithson, Lee D., infrared spectra of some oils, greases, etc-----	20296	Snake venom, see Venom.	
Smithsonian contribution to astrophysics-----	1496, 9386, 14692-694, 18310, 20131-132	Snakes, poisonous, of world, manual for use by U.S. amphibious forces-----	16454
Smithsonian Institution:		SNAP (systems for nuclear auxiliary power), see Atomic energy.	
annual reports, 1849-1961, index-----	5719	Snapp, Oliver I., insect pests of peach, east of Rocky Mountains-----	16732
departmental edition-----	4671	Snapper, southeastern coast, U.S., trawling explorations-----	8272
document edition-----	4671	Sneezeweed, livestock poisoning in Western States, reducing losses-----	14856
		Sniegocki, R. T.: artificial recharge in Grand Prairie region, Ark.—	
		equipment and controls used-----	10298
		geochemical aspects-----	20740
		principles of siphons-----	14032
		Snieszko, S. F., freshwater fish diseases caused by bacteria, etc-----	4956
		Snipes, hunting, possession, transportation, importation, Federal regulations, 1963-64-----	15535
		Snodgrass, Robert E., contribution toward encyclopedia of insect anatomy-----	16561
		Snow:	
		and firn of Greenland ice sheet, stratigraphic studies-----	2188
		drifting, scale model studies-----	4840
		dry, theory of densification on high polar glaciers-----	6362
		evaluation of snow, ice, slush removal and disposal equipment for Washington International airport-----	9454

# INDEX 1963

Entry	
Snow—Continued	
Federal-State-private cooperative surveys—	
Arizona-----	4284
Colorado and New Mexico-----	4285
Colorado and Wyoming-----	11288
Colorado, early season report-----	3336
Colorado, Rio Grande, Platte and Arkansas drainage basins-----	4285
Columbia basin-----	4286
Idaho-----	9391
Montana and northern Wyoming-----	4287
Nevada-----	4288
summary, 1910-61-----	1502
Oregon-----	4289
Utah, Bear and Colorado River basins-----	4290
Washington State-----	4291
Western United States, including Columbia River drainage in Canada-----	9392
Wyoming-----	4292
oversnow transport-----	19138
physics and mechanics of snow as material-----	2190
processed, unconfined compressive strength and ram hardness, correlation-----	19136
snowpacks, characteristics, use of radioactive sources in measuring-----	19259
surveys, Alaska-----	9389
stabilization for roads and runways-----	19135
temperature, relationship with soil frost formation-----	10234
ventilated, thermal conductivity-----	19133
whitout seeding procedures, investigation-----	19134
Snow Mountain and its grasslands, Communist China-----	2514
Snyder, Carl F., etc., of aqueous solutions of invert sugar-----	12897
Snyder, Charles T., hydrology of stock-water development—	
Ely grazing district, Nev-----	5026
public domain of western Utah-----	6561
Snyder, George L., pillowed lavas-----	6560
Snyder, Richard G., case of survival of extreme vertical impact in seated position-----	4504
So you're going abroad, health hints for travelers-----	16534
Soap, industry, outlook for 1963 and review of 1962-----	4542
Soapstone, minerals yearbook chapter-----	18109
Social bases of political parties in France and Italy-----	12435
Social insurance, adviser and research analyst, examination announcement, amidt-----	6027
Social insurance research analyst, see Research analyst.	
Social problems, see Social work and problems.	
Social psychology, see Psychology.	
Social sciences:	
bibliography of periodicals and monograph series—	
Denmark, 1945-61-----	7764
Iceland, 1950-62-----	1900
cybernetics application, USSR study-----	10485
developmental activities of social studies project, report-----	17385
economic and social implications, current projects, 1962-----	9250
elementary studies, unit planning and teaching-----	13871
foreign bibliographies series... 1900, 7764	

Entry	
Social sciences—Continued	
problems of development under building of Communism, USSR study-----	6955
psychology, USSR translation-----	12316
social studies, introductory, USAFI course, exercise book-----	12035
USSR—	
Academy of Sciences, recent reports-----	8965
teaching-----	15451
USSR and construction of communism-----	3005
see also Sociology.	
Social scientists, chart-----	1186
Social security:	
act, aid to the blind programs-----	2235
act, amend-----	
law-----	11723
reports-----	7971, 9869, 9989
benefits—	
for adults disabled in childhood-----	13049
how to estimate amount, how you earn them, etc-----	7377
outside United States-----	18315
you don't have to retire completely to get them-----	5961
bulletin-----	4194
statistical supplement, 1961-----	20137
cards—	
adult education reader-----	7376
how to obtain and use-----	16562
coverage for—	
clergymen and religious workers abroad-----	10317
clergymen, general information-----	18313
household workers-----	9306
disability insurance program, facts and figures-----	13045
domestic workers paid \$50 in wages in 3 months earn social security-----	20134
farm people and old-age, survivors, and disability insurance in U.S., nature and scope of program-----	11285
farmers, are you getting credit due you?-----	1376, 18314
financing your social security benefits-----	5663
foreign developments-----	1499, 9387
handbook-----	11283
if you work while you get social security payments-----	9305, 20133
laws—	
compilation-----	2022
old-age, survivors, and disability insurance benefits-----	5662
reader for English classes for foreign-born adults-----	11282
nonprofit organizations and their employees, how it works-----	13046
now that you are retiring, general information-----	13048, 21111
program, disability insurance benefits, don't guess about your rights-----	11286
publications list-----	12980
research and statistics legislative notes-----	1497-98
research and statistics notes... 1499-1501, 3329-32, 7430-31, 9387, 11287, 14698-699, 16563, 20136, 21113	
right to question decision made on your claim-----	11284
rulings on Federal old-age, survivors, and disability insurance-----	4195, 5722
self-employed, information-----	7374
servicemen and veterans-----	7375
suggested outline for studying-----	9308
tax guide for household employers-----	626
three who came back!-----	21110
trust funds, status-----	18316



	Entry
Social security—Continued	
what you need to know about disability insurance benefits.....	21109
your check.....	9309
your social security, Federal old-age, survivors, and disability insurance, basic information.....	11281, 13047
see also Disability Insurance—Old age, survivors and disability insurance—Public assistance—Unemployment Insurance.	
Social Security Administration:	
actuarial study series.....	14696-697, 18311
professional opportunities.....	20135
Social service, see Social work and problems.	
Social studies, see Social sciences.	
Social welfare, see Social work and problems.	
Social work and problems:	
child welfare workers, training for placement responsibilities.....	4601
citizen's role in social welfare policy.....	20364
civil defense emergency welfare services, role of voluntary agencies.....	21178
development and urbanization.....	2439
graduate schools, field instruction guides.....	13044
health, education, and welfare services in public housing community.....	19339
mentally retarded child, guide to services of agencies.....	13312
methodology and scores of socioeconomic status, description of CB measures used in 1960 census program.....	16911
new directions, current and emerging issues, background paper.....	15622
new frontiers in human welfare (remarks).....	19338
nonmetropolitan territories, social policy concerning, ILO convention and recommendations, text.....	20457
planning for community needs in health, education, and welfare.....	19333
problems of American Community (remarks).....	21151
public welfare—	
agencies, staff development.....	16696
code of Federal regulations.....	6432
State salary ranges.....	19340
research relating to children, studies in progress.....	176, 11647
trends.....	19334
undergraduate students, field experience and summer employment.....	13044
unmarried mothers, use of social services.....	6011
welfare, etc.—	
indicators.....	3765
international development programs, contribution of Welfare Administration.....	20250
Social workers:	
child welfare workers, training for placement responsibilities.....	4601
correctional, examination announcement.....	9761
examination announcements.....	7781, 18724
public assistance caseworkers, analysis of appointments.....	20745
public social welfare personnel, report of survey, 1960.....	14803
role in child health projects for mentally retarded children.....	6010
State salary ranges.....	10305

	Entry
Socialism:	
Bolivia, Socialist sector suggests reforms to MNR political committee.....	881
Communist China, quantity of value, inquiry into calculating.....	5302
constitutions of socialist states, Chinese studies.....	12273
decisive factor in development of society, USSR study.....	2687
developing science in socialist countries, USSR study.....	20769
economic accounting problems, socialist, discussion among Chinese economists.....	5370
importance of funds for social consumption in satisfying needs of the people.....	8749
Italian Communist Party position on relations with right and left.....	3009
people's democratic State in the building of socialism.....	7090
Pravda attacks Italian Socialist leader Nenni for anti-Communist policy.....	876
production, speed, Communist Chinese explanation.....	6661
property concept, shift to Communist, laying ideological groundwork, USSR study.....	16225
quantitative relationship between 2 main kinds of social production, Communist Chinese study.....	816
reinforcement of solidarity and unity.....	10757
Socialist bloc countries, academies of sciences, alms, etc., Polish study.....	8574
Socialist countries, shipbuilding production after World War II.....	2976
Socialist solidarity and national liberation, Soviet comments.....	7064
transition to communism, labor and self-interest principle, USSR study.....	12765
two points on question of productive forces, Communist Chinese study.....	965
unity and peaceful coexistence, USSR comments.....	6973
Socialist Party of Chile, letters exchanged with Communist Party.....	2623
Societies, see Scientific societies.	
Society:	
decisive factor in development, USSR study.....	2687
primitive, Owenke Tribe of Inner Mongolia, Communist China study.....	2650
scientists and society (remarks).....	9700
Socio-hygienic problems of controlling cancer, USSR.....	656
Sociologists, social scientists, chart.....	1186
Sociology:	
Communist China, translations.....	783, 806, 962, 1034, 1100, 2502, 2526, 2555, 2572, 2636, 2851, 2884, 2899, 2923, 2992, 5127, 5182, 5222, 5232, 5321, 5327, 5338, 5363, 5414, 6089, 6718, 6743, 6815, 6838, 6845, 6929, 6936, 6998, 7028, 7047, 7069, 7131, 8517, 8642, 8667, 8703, 8727, 8732, 8752, 8813, 8829, 8833, 8894, 8915, 8956, 8977, 10840, 10870, 12468, 12640, 12736, 12755, 14153, 14206, 14233, 14250, 14382, 14423, 14426,

# INDEX 1963

				Entry
<b>Sociology—Continued</b>				
Communist China, translations—				
Continued				
15748,	15759,	15929,	15960,	
16073,	17631,	17801,	17959,	
19376,	19561,	19641,	19674,	
19681,	19757,	19765,	20822,	
20855,	20895			
development of social production,				
some questions relating to laws				
governing Communist China—				
				666
Eastern Europe, translations—				
				693,
811,	862,	903,	963,	989,
1108,	1141,	2632,	2655,	2783,
2838,	2888,	5114,	5230,	5265,
6693,	6781,	6887,	7006,	7026,
7125,	8554,	8589,	8637,	8749,
8788,	8810,	8874,	8890,	10414,
10624,	10728,	10789,	10822,	
10851,	12293,	12358,	12420,	
12471,	12483,	12569,	12632,	
12754,	12759,	14172,	14175,	
14259,	14307,	15716,	15760,	
15774,	15875,	15940,	16000,	
16041,	16046,	16122,	16194,	
17648,	17849,	18003,	19486,	
19685,	19703,	19766,	20778,	
20798,	20850,	20903		
education for home and family liv-				
ing				
				13846
international meetings, world list				
				4315
Israel, information—				
				1110,
				2880, 5389, 6754
Marxist, and sociological research,				
USSR study—				
				8700
North Korea, translations—				
				675,
709,	2538,	2903,	2909,	8461,
8587,	8644,	12426,	15959,	16115,
16187,	16202,	17925,	20864	
North Vietnam, translations—				
				645,
710,	927,	1059,	1147,	2750,
2787,	2991,	5322,	6736,	6919,
7019,	7104,	8498,	8839,	10373,
10693,	10849,	10872,	12391,	
12482,	12620,	14150,	14232,	
14313,	14336,	14363,	15682,	
15722,	15832,	15999,	16067,	
16210,	19408,	19605,	20792,	
20891				
Norway rat—				21032
Sod, growth response of some shelter-				
belt species following removal—				
				15568
Soda (baking):				
massive sodium bicarbonate infu-				
sion, effect on renal function—				
				14920
renal regulation of bicarbonate				
loads during hypothermia—				
				4418
Sodium:				
and sodium compounds, minerals				
yearbook chapter—				
				18107
atmospheric, in earth's atmosphere—				
dermal excretion, relation to bal-				
ance, etc—				
				1813
flash-vaporization facility, space-				
craft propulsion study—				
				11041
high temperature properties—				
				3234,
				7371, 16463
mass transfer—				
corrosion sample data 1962—				
				18570
metallurgy screening test data				
and analysis—				
				14971
oleate, adsorption on fluorite, ba-				
rite, and calcite, infrared				
studies—				
				9130
Sodium bicarbonate, see Soda				
(baking).				
Sodium chloride, see Salt.				
Sodium dimolybdate, low-temperature				
heat capacities and entropies at				
298.15° K—				
				9122
Sodium ditungstate, low-temperature				
heat capacities and entropies at				
298.15° K—				
				9122
Sodium fluosilicate, process for recover-				
ing beryllium from Utah ore—				
				5483

		Entry
Sodium gallate:		
effect on nucleic acid content in		
organs of healthy and irradi-		
ated rats, USSR study—		
		12445
prevention and treatment of acute		
radiation sickness in dogs,		
USSR study—		
		12359
Sodium lactate, use in radiation		
sickness, USSR study—		
		16103
Sodium monomolybdate, low tempera-		
ture heat capacities and en-		
tropies at 298.15° K—		
		3101
Sodium polyphosphates, effects on		
weight of fryer chickens during		
chilling—		
		11460
Sodium reactor experiment, see Re-		
actors (atomic).		
Soenda Strait, sailing directions—		
		7351
Soft drinks, sweeteners used by bev-		
erage industry—		
		10049
Softwoods:		
lumber, Tariff Commission report—		
		5752
plywood—		
current industrial reports—		
industry, outlook for 1963 and re-		
view of 1962—		
		4551
western, standard of trade,		
amendment—		
		5959
structural characteristics—		
		12170
western, standard of trade, amdt.		
		4512
Sohn, Jung Yol, relief—		
		18834
Soil bank programs, see Soils.		
Soil conservation:		
abstracts of material published—		
		5791,
		18396
Index—		
		5790
benefit to wildlife—		
		9564
Communist China—		
		2850
districts—		
role in rural development (ad-		
dress)—		
		5814
status of organization, by States,		
approximate acreage, etc—		
		3333-34
farming terraced land—		
		5822
Piedmont southern farms, methods—		
		11450
research—		
Great Plains States—		
		4366
Pacific Northwest—		
		16750
reserve program of soil bank, sta-		
tistical summary, 1961 & 1962—		
		16724
soil conservation (periodical)—		
		4196
soil conservation and domestic al-		
lotment act, amend—		
hearings—		
		17156,
		19020
statutes, compilation—		
		1683
tips for city and suburban		
		5816
Yellow River middle loess region—		
Communist China handbook—		
		14212
relation of erosion in gully drain-		
age systems, Communist Chi-		
nese study—		
		6695
see Soil erosion.		
Soil Conservation Service:		
appropriations, 1964, Agriculture		
Dept—		
		7979
conservation and watershed pro-		
grams, speed up under Public		
works acceleration act—		
		1507
national engineering handbook—		
		20139
SCS-CI series—		
		13050
soil survey reports, list—		
		9388
watershed program, how local peo-		
ple participate in small proj-		
ects—		
		14882
Soil erosion:		
Cecil soil in Southern Piedmont,		
control studies—		
		7584
control in north Mississippi with		
plantings of loblolly pine—		
		20710
control structures on skid trails—		
		10237
erosion and sedimentation in semi-		
arid environment (series)—		
		19310

# JANUARY-DECEMBER

	Entry
Soil erosion—Continued	
gully drainage systems in middle Yellow River loess region, relation to water and soil conservation, Communist Chinese study	6695
mulches for wind and water erosion control	13156
roadbank, and its control in Piedmont uplands of Georgia	20262
runoff plot design and installation	20263
Wisconsin, gully control structures	7541
Soil moisture, <i>see</i> Soils.	
Soil temperature, <i>see</i> Soils.	
Soils:	
and fallout from nuclear attack	4367
annotated bibliography on freezing and thawing	14832
Cecil and Lloyd series, Piedmont forests, hydrologic properties	6519
Cecil, Southern Piedmont runoff and erosion control studies	7584
classification, Thailand, ground mobility	13888
Communist China, translations from Soil	10528
conservation methods of northern coastal plain	7559
contaminated—	
radiation hazards	10135
reclaim	10136
control in military construction, technical manual	4458
dustproofing and waterproofing, laboratory studies of materials	17413
elastic moduli determined by field vibratory techniques, procedures	13883
Elmira-Williamsport region, New York and Pennsylvania	19313
comparison of forest regions and great soil groups	19313
freezing, influence of forest management practices, northern Minnesota	12187
frost behavior effects, test results	2189
frost formation, relationships among air, snow and soil temperatures	10234
Grayling and Rubicon sands, cordwood heights of mixed oak stands	12177
Guam, mineralogy and description of profiles	19316
Hawaii, water storage capacities under 4 different land uses	17484
know your soil, importance of soil surveys	5817
laterite, genesis and hardening	1730
lunar and planetary, evaluation of infrared spectrophotometry for analysis	9189
moisture—	
exponential and linear diffusivity functions, power series solution of one-dimensional flow equation	1629
neutron meter calibration curves, method for determining slope	8302
moisture content and bacteria survival in simulated Martian environment	83
northern hardwood forests, interrelationship with leaf fall and humus depth	6490
publications, price list, surveys, erosion, conservation	7393
rare and trace elements, determination	18510
science, abstracts pertaining to Communist China in USSR journals	17740

	Entry
Soils—Continued	
soil bank programs—	
questionable participation in Hidalgo County, Tex., GAO report	10261
statutes, compilation	1683
soil bank reserve program—	
conservation—	
release of land from contracts, statistical summary, 1961 & 1962	13839
recontract expiring contracts, hearings	16724
remove limitation—	
hearings	17156
report	19042
soil survey reports—	
Adams County, Iowa	19020
Bailey County, Tex.	13054
Bath County, Ky.	13057
Boone County, Mo.	2 116
Calhoun County, S.C.	3335
Carbon County, Pa.	20140
Chester County, Pa.	1505
Childress County, Tex.	13056
Clallborne County, Miss.	18321
Delaware County, Pa.	18320
Dorchester County, Md.	13056
Dundy County, Nebr.	16565
Fairfax County, Va.	9390
Habersham County, Ga.	13051
Hard County, S. Dak.	14701
Hardin County, Tenn.	13052
Lee County, S.C.	18319
Lincoln County, Miss.	13059
list	18318
Mathews County, Va.	9388
Northumberland and Lancaster County, Va.	1504
Oconee County, S.C.	13058
Roger Mills County, Okla.	13053
San Juan County, Wash.	18317
San Juan County, Wash.	1503
Twigg County, Ga.	16566
Washington County, Md.	13055
Yadkin County, N.C.	1506
York County, Pa.	16564
stabilization—	
chemically modified quicklime as stabilizing material, laboratory and field investigations	15460
quicklime as stabilizing material, investigations	15459
strontium-90 on earth's surface, world-wide sampling program, summary and interpretation	1842
subgrade, frost action effects, counter-measures	12086
temperature—	
Aniak, Alaska	12087
Fort Yukon, Alaska	4844
relationship with frost formation	10234
texture, organic matter important in field analysis	12174
trafficability	13884
forecasting, airphoto approach	13885
Thailand, ground mobility	13888
USSR, local conductivity and its distribution	19730
water intake, experiments for high school students	14877
White Oak Lake bed, Oak Ridge, Tenn., chemical and physical data	1836
<i>see also</i> Loess—also headings beginning Soil.	
Sokal, Ukrainian SSR, social development in Sokal' Rayon	8490
Sokaski, Michael:	
cleaning unsized fine coal in dense-medium cyclone pilot plant	16344
use of sieve bend and scalping deck with vibrating and screen in dewatering and draining dense medium from fine coal	20968

# INDEX 1963

	Entry		Entry
Sokoloski, Martin M., measurement of transport properties of polar semiconductor .....	9173	Solid-state self-scanning display device .....	18497
Solar:		Solids:	
NOTE.—For other subjects beginning Solar, see Sun.		adsorption properties of nonuniform surfaces, USSR study .....	934
Solar batteries:		apparatus for repeated automatic extraction of porous solids with hot solvent .....	16802
interplanetary spacecraft .....	18145	crystalline, mechanical behavior, symposium proceedings .....	9207
new form of solid state solar generator .....	5873	isotopic analysis with 6-inch radius mass spectrometer .....	9682
satellite, preliminary design of solar cell generator .....	18150	properties at low temperature .....	11515
solar-cell power systems, space-radiation effects on, handbook .....	18130	surface tension, measurement, USSR study .....	5326
Solar cells, see Solar batteries.		Solubility:	
Solar energy:		determination in 2 phase systems .....	4481
electric power stations, USSR study .....	2519	impurities in beryllium, X-ray analysis, USSR study .....	6764
solar-cell power system, space-radiation effects on, handbook .....	18130	solid, of calcium and silicon in magnesium, effect of indium .....	5496
Solar flares:		Solutions, spectrochemical analysis .....	14514
hydrogen, helium, and heavy nuclei in 1960 cosmic ray event .....	11051	see also Heat of solution.	
radio bursts of spectral types 2 and 4, their relations to optical phenomena and geomagnetic activity .....	9386	Solvents, see Extraction (chemistry).	
solar cosmic ray event, Sept. 26, 1960 .....	3157	Somali Republic:	
sunspots and flares, relative position .....	14694	economic cooperation agreement .....	14715
Solar furnaces, mass transfer in turbulent flow through orifice of chamber .....	10457	import tariff system .....	10335
Solar power, see Solar energy.		newly independent nation, fact sheet .....	3338
Solar radiation:		Somalia, see Somali Republic.	
dynamic thermal vacuum technique for measuring solar absorptance of spacecraft coatings .....	9179	Sonar, acoustical space-time information processing .....	7365
earth reflected—	18137	Sonotone Corporation, contract with Air Force Dept. for nickel cadmium aircraft storage batteries, unreasonable prices, GAO report .....	17514
on arbitrarily oriented spinning flat-plate .....	14569	Songs, Armed Forces song folio .....	3464
upon spherical satellites in general elliptical orbits .....	9147	Sonic anemometer for study of turbulent wind loading on missiles .....	1740
pressure, effect on spin of Explorer XII .....	18147	Sonic boom:	
solar cosmic ray event, Sept. 26, 1960 .....	3157	annoyance, effects, etc. ....	13219
use in drying mahogany lumber in Puerto Rico .....	8296	response of light airplanes .....	16405
X-rays, proportional counter spectrometer for measurement .....	7618	Soo, Yoo Chul, see Yoo Chul Soo.	
Solar system:		Sorbents, see Adsorbents.	
collapse phase of early solar evolution .....	3159	Sorex, see Shrews.	
neutrons sources .....	5608	Sorption, see Adsorption.	
search for extraterrestrial life .....	18124	Sound:	
Solder and soldering:		acoustic journal (USSR periodical) .....	9018
brazing and soldering, wetting dynamics .....	12966	acoustical measuring instruments, Soviet patents on devices .....	676
brazing, marine engineering regulations .....	13336	acoustical space-time information processing .....	7365
brazing of titanium with rapid heating, USSR study .....	19739	dolphin, ultrasonic and sonic detection characteristics, USSR study .....	17980
mechanized brazing of heat-exchanger tubes, USSR study .....	17676	fish sounds, significance, USSR study .....	8662
sintered aluminum powder, USSR study .....	8546	insulating capability of ship hull structures, USSR study .....	15953
Soldiers		plane hydroacoustical wave, diffraction at boundary of elastic plates, USSR study .....	17923
civil relief act, amend, hearing .....	8126	point-contact transducers for ultrasonic testing .....	12965
first aid, field manual .....	9653	propagation of plane acoustic waves in radiating gas .....	12889
honor, Army pamphlet .....	11540	rocket, far-field acoustic environments due to moving sound source, predicting techniques .....	16384
Soldiers' Home, District of Columbia: appropriations, 1964—		sea, physics .....	19983
hearings .....	7981	ultrasonics:	
law .....	20425	bibliography .....	4554
reports .....	9874	chemical and biological action, USSR study .....	20882
Sole source procurement (hearings) .....	6191	phenomena and methods of measurement, bibliography .....	5473
Solenoids, finite helical, magnetic field of .....	19937	velocity in petroleum reservoir rocks and other mediums, bibliography .....	7205
Solid state physics (Russian periodical):		see also Noise.	
translations .....	6772		

# JANUARY-DECEMBER

	Entry
Sound recordings, use to record district court proceedings, report	13614
Sounding (meteorology):	
ionosphere, NASA topside sounder program	20984
mesospheric wind determination from successive hourly rocket soundings	18451
temperature and winds above 50 km over Wallops Island, Va.	7287
upper atmosphere, rocket development in Japan	7204
Sounding and soundings, electrical sounding by method of extraction of fields, USSR study	6696
Soundproofing, <i>see</i> Insulation.	
South, Jerry C., Jr., application of Dorodnitsyn's integral method to nonequilibrium flows over pointed bodies	16406
South (U.S.):	
controlling sugarcane beetle on corn	9575
cost of transporting freight	5101.
5103, 8430, 10352, 10354-355	
fallout facilities and fuels on farms	13092
fig growing for home use	29
pulpwood chipping installations in Midsouth	12194
pulpwood production, 1962	15588
southern pine lumber grade yields	6522
Southern Plains, commercial wheat farms, costs and returns, 1962	15413
sweetpotato canning industry, feasibility of expanding	11458
South Africa:	
economy, basic data	6591
exports and imports, licensing and exchange controls	10334
labeling and marking requirements	6603
stockfish and spiny lobster fisheries	8271
South America:	
east coast—	
lights and fog signals, list	3208.
5651, 9258	
tide tables, 1964	9766
flight information publication, enroute	3689
health information for travel in	16500
population growth	13693
sailing directions, change	18214
savings and loan movement (address)	4891
west coast—	
lights and fog signals, list, change	5652
tide tables, 1964	6040
South Asia, <i>see</i> Asia.	
South Atlantic States, <i>see</i> Atlantic States.	
South Bend, Ind.:	
aged, problems, hearing	6193
occupational wage survey—	
departmental edition	12799
document edition	11743
St. Joseph County Airport, weather observations, hourly, decennial census	21160
South Carolina:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4568
climatological data	3517
community effort in boll weevil control	4338
county business patterns, activities covered by OASDI program	15052
electric rate book	513, 15499

	Entry
South Carolina—Continued	
5B redevelopment area, statistical profile	13371
food processors, problems and prospects	1474
landings, fish and shellfish	4197, 13949
mineral industry, minerals yearbook chapter	19854
mineral interests, conveyance to surface owners	11995, 13525, 16977
peaches, marketing, 1962 season	13152
population, 1960, characteristics	18693
precipitation data, hourly	3771
public school finance program, 1962-63	15443
weather stations, decadal census	16683
ZIP code directory	20065
South Central States, <i>see</i> Central States.	
South China, <i>see</i> China.	
South China Sea:	
plankton and benthos distribution, general characteristics	12575
western shores, sailing directions, change	14621
South Dakota:	
annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics	4567
climatological data	3517
county business patterns, activities covered by OASDI program	13284
Edgemont NE quadrangle, Fall River and Custer Counties, geology	12219
electric rate book	13921
mineral industry, minerals yearbook chapter	1223
population, 1960, characteristics	10886
precipitation data, hourly	3771
public school finance program, 1962-63	15444
statue of Joseph Ward—	
acceptance, print proceedings, report	9873
place in Statuary Hall, reports	8077, 9872, 13530
weather stations, decadal census	16684
ZIP code directory	20066
South Korea, <i>see</i> Korea.	
South Pacific Commission:	
contribution of U.S., remove celling—	
hearing	18941
report	20482
South Platte River and Valley, cattle-feeding industry, changes	10052
South Pole Magnetic Observatory, magnetograms and hourly values	11672
South Sea, <i>see</i> Pacific Ocean.	
South Silverton mining area, Colo., geology and ore deposits	8337
South Silverton mining area, San Juan County, Colo. (series)	8337, 10287
Southeast (U.S.):	
aquatic plants, guide and key	6451
combine cutting and feeding mechanisms	4374
flight information publication, enroute-high altitude	3691
principal electric facilities, map	522
pulpwood prices, 1961	6521
vegetable processing industry, marketing practices and management problems, 1960	5829
Southeast Asia, <i>see</i> Asia.	
Southeastern Forest Experiment Station:	
annual report 1962	15555
forest survey release	10242



# INDEX 1963

Entry	Entry
Southeastern Forest Experiment Station—Continued	Soviet bloc—Continued
research notes----- 6518-23	accelerated production of chemicals planned, USSR translation... 17695
station papers----- 6524-25, 8301-4, 10243-247	Brazilian reaction to U.S. criticism of trade----- 2581
Southeastern Power Administration: appropriations, 1964, hearings----- 17162	captive European nations, trends, current conditions, etc., report----- 9880, 18940
monthly report----- 3919	chemical institutions, Hungarian chemists visit----- 12623, 14115
report, 1963----- 20141	conditions behind Iron Curtain, study mission report----- 9866
Southeastern Regional Highway Research Conference, proceedings----- 3303	export of strategic materials to, hearings----- 2099
Southern California Edison Co.: occupy certain lands for hydroelectric project, extend permit—law----- 13421	imports from Communist countries, hearing----- 15303
reports----- 7926, 12001	ministers of public health of countries of soviet camp, 6th conference----- 2901
Southern Forest Experiment Station: forest survey release----- 12194	scientific conferences, reports----- 14137
occasional papers----- 8305, 12195	shipbuilding production after World War II----- 2976
publications, lists----- 8305, 10248, 13991, 17474	Soviet cataloging of faint stars in Southern Hemisphere----- 12352
publications, 1955-61----- 8305	Soviet public health (USSR periodical): translations----- 689, 6643
southern forestry notes----- 4198	Soviet report on Western missiles and antimissiles----- 12621
Southern Hemisphere, see Hemisphere, Southern.	Soviet state and law (periodical): translations----- 5306
Southern Institute of Forest Genetics, general information----- 15589	Soviet Union, see Union of Soviet Socialist Republics.
Southern Pacific Co.: accidents----- 17570, 19369	Soviet writer discusses transition to world-communism, USSR----- 661
emergency board report----- 6351	Sovkhozes, see State farms.
Southern pine, see Pine.	Sowa, Walter, Jr., midshipman, reapointment----- 16981, 13496, 13640, 15343
Southern Ry., accident----- 8433	Sowing, pellet seeding on western rangelands----- 11461
Southern sky survey payload----- 7290	Soybean meal: futures, commitments of traders----- 3530
Southern States, see South (U.S.).	futures trading and open contracts----- 3751-52
Southern Ute Tribe, see Ute Indians.	Soybean oil: edible, Northern Regional Research Laboratory, publications list----- 5795
Southern Utilization Research and Development Division, publications and patents, semiannual lists----- 14845, 20268	futures, commitments of traders----- 3530
Southold, N.Y., geology and groundwater resources----- 20742	futures trading and open contracts----- 3748, 3752
Southwell, C. R., natural resistance of woods to biological deterioration in tropical environments----- 3221	Soybeans: edible protein products, Northern Regional Research Laboratory, publications list----- 5796
Southwest (U.S.): drought effects, general summary----- 14022	futures, commitments of traders----- 3530
droughts, 1942-56 (series)----- 605, 8335, 14022, 19312, 20733	futures trading and open contracts----- 3752
flight information publication, enroute-high altitude----- 3692	harvested for beans, acreage, yield, production, 1961-62----- 16021
ground water levels, 1956-60----- 17534	processing plant at Vienna, Md., ARA loan, hearing----- 11872
mesquite control on rangeland----- 13171	SP series, see FMC SP series—MA SP series—NASA SP series—Statistical profile.
meteorologic phenomena of drought----- 605	Space: atmospheric structure and its variations in lower thermosphere----- 16772
ponderosa pine—estimating volumes and diameters at breast height from stump diameters----- 17495	physics, studies----- 13199
heavy pruning reduces growth----- 17489	rules of practice in economic proceedings, CAB procedural regulations----- 11650
volume, taper, and related tables----- 15584	see also Outer space.
principal electric facilities, map----- 520	Space Administration, see National Aeronautics and Space Administration.
Southwest Africa, see Africa.	Space age: communications, regulations in interest of truth and freedom (address)----- 486
Southwestern Power Administration: appropriations, 1964, hearings----- 17162	difficult decisions (address)----- 4395
operations, GAO audit, report----- 12197	NASA program----- 9143
Southwestern Power System, audit by GAO, report----- 12197	national security in space age (address)----- 9620
Southwestern States, see Southwest (U.S.).	
Sovetskaya meditsina (periodical): translations----- 5372	
Sovetskoye gosudarstvo i pravo (periodical): translations----- 5306	
Sovetskoye zdoravookhraneniye (periodical): translations----- 689, 6643	
Soviet bloc: academies of sciences of Socialist bloc countries, aims, etc., Polish study----- 8574	

	Entry		Entry
Space age—Continued		Spacecraft—Continued	
United States space activities, 1962	4719	automated, of United States	19887
Space-Age Planning Conference, proceedings, 1963	16361	Blue Scout launch vehicle configurations, static aerodynamic characteristics, transonic	
Space biology:		wind-tunnel investigation	19927
astrobiology, history, nature and theory	10425	blunt body, ablation to Mach number of 13.1, free flight investigation	1297
bibliography	9084	capsule-type vehicle at parabolic velocity moving-cockpit-simulator study of piloted entries into earth's atmosphere	11068
birth of cosmic biology, USSR study	8484	carbon monoxide, light induced in closed environments	18506
cosmic space and its effects on human behavior, USSR study	2517	circumlunar, navigation theory, transition matrix assumptions	20980
life in outer space, problems, USSR study	15802	coatings, solar absorptance and thermal emittance, dynamic thermal vacuum technique for measuring	9179, 18137
medicine and the cosmos, USSR study	8986	communications system, antenna beam elevation angle for control of tropospheric interference between earth terminals and terrestrial stations	18192
medico-biological control in cosmic flight, USSR study	739	control, guidance, and navigation	5545
microbes and the cosmos, USSR study	931	control of large launch vehicle with limited thrust vectoring in presence of winds	16409
problems, 1962, USSR study	8754	data acquisition	5544
Soviet studies	8897	Delta 9 launch vehicle, flight vibration data	20978
USSR reports	10686	elastic stress distributions for cylinder-to-hemisphere and cone-to-sphere junctions in pressurized shell structures	5587
see also Life on other planets.		electric propulsion, papers	5550
Space chambers, thermal-vacuum chambers for testing orbital environments, survey	9168	expandable structures, folding deformations theory	3161
Space charge-flow theory and electrode design for electrostatic rocket engines	1288	finned-vehicle attitude control system, analytical study	7266
Space embryology, USSR studies	8948	flight to moon by rocket-mass action or orbital rendezvous, USSR study	5397
Space exploration, see Outer space.		guidance of vehicle approaching earth, effect of deadband about desired perigee	5597
Space flight, see Astronautics.		handling qualities and trajectory requirements for terminal lunar landing, analog simulation	16396
Space law, international aspects of exploration and use, 1954-62, documents, print as Senate document report	9986	heat transfer to sphere with retro-rocket exhausting into free stream	1310
Space medicine, see Medicine.		international tracking of space vehicles, 5th anniversary, program	5507
Space perception, orientation of honey bee, physiological mechanism, USSR study	905	interplanetary, solar cell power supply, method to optimize	18145
Space pilots, see Astronauts.		labor market developments	13874
Space Research Committee, Goddard Space Flight Center contributions to meetings, May 1962	12855	landing, slideout dynamics of vehicle equipped with tricycle skid-type landing-gear system	11071, 19911
Space science:		large space chambers for testing launch vehicles	9168
bibliography, 1957-61	9092	aeroelastic model approach for prediction of buffet bending loads	20998
NASA program and physics teacher, papers	19900	dynamic response of rising and falling balloon wind sensors with application to wind load estimates	20981
research in space science	20131	hammerhead, dynamic response to transonic buffeting	19934
structural research problems for support of future space missions	18164	national launch vehicle program, description	1267
translations from Stintia si tehnica	8924	lunar landing or launch hazards, consideration of surface ballistics	7250
ultraviolet photodetectors, characteristics and applications in spectroscopic research	16366	lunar landing trajectories using jet VTOL test vehicle, flight evaluation	5601
Space stations, control system, simulator study	3139		
Space surveillance system, see Naval space surveillance system.			
Space vehicles, see Spacecraft.			
Spacecraft:			
accelerometer controlled rigid vehicle, effect of propellant sloshing on stability	20982		
aerodynamic damping of 0.02 scale Saturn SA-1 model vibrating in 1st free-free bending mode	19926		
aerodynamics of space vehicles, papers	7234		
aerospace accident and maintenance review	3421		
aerospace maintenance safety	7603		
alkaline battery evaluation for future space vehicle design	7594		
antennas, self-erecting flexible foam structures	7267		
atmosphere—			
analysis	11167		
gas chromatographic measurement of trace contaminants	7293		

# INDEX 1963

Entry	Entry
Spacecraft—Continued	Spacecraft—Continued
lunar mission vehicle, effects of lift on separation distance and loads on abort trajectories at maximum dynamic pressure... 11055	reentry vehicles—continued
lunar-orbit-rendezvous scheme, parametric investigation... 11025	attenuation and reflection of telemetering signals by ionized flow fields surrounding typical reentry bodies... 16378
lunar vehicle, equations for determining position in earth-moon space from simultaneous optical measurements... 5596	blunt bodies at transonic speeds, aerodynamic characteristics... 10986
MA-7, acceleration disturbances encountered, effect on liquid-vapor interface in baffled tank during weightlessness... 3152	blunt configuration, equations for Newtonian static and dynamic aerodynamic coefficients for body of revolution with offset center-of-gravity location... 14546
major NASA launchings, 1958-62, chronology... 13669	blunt delta configurations with 75° sweepback, subsonic aerodynamic characteristics... 18134
manned—	blunted glider configuration, static longitudinal stability characteristics... 11000
abort from lunar landing and return to rendezvous in 50-mile orbit... 1306	blunted right-triangular pyramidal lifting configuration employing variable-sweep wing panels, aerodynamic characteristics at Mach numbers from 0.40 to 1.10... 7249
flight vehicle combustibles, fire and explosion hazards, review... 5470	canted multiple-air-bag load-alleviation system, landing impact tests... 16401
launch vehicle model, buffet pressures investigation... 12851	charring materials, influence of heating rate and test stream oxygen content on insulation efficiency... 14573
variable-drag, payload ejected in low earth orbit, trajectory analysis... 16402	cockpit displays for pilot control during hypersonic lifting-cone configuration, aerodynamic characteristics at angles of attack up to 180°... 7265
manufacturing, job opportunities... 3039	conic and spheric bodies, Newtonian theory for estimating characteristics at hypersonic speeds... 11089
Mariner II reports... 10981	constant-altitude variable pitch maneuver initiated at velocities up to escape velocity, longitudinal range attained... 12881
materials for space operations, papers... 7236	deceleration effects on range sensitivity for modulated-lift reentry at supercircular speeds... 18154
Mercury, inflatable components of personal equipment for astronaut body instrumentation and survival at sea inclusion... 3119	disk-shaped configuration, investigation of effects of bank angle, etc., of initial banking on lateral and longitudinal ranges... 7274
meteoroid bumpers, single aluminum, effectiveness... 11061	lateral range control by banking during initial phases of supercircular re-entries... 1303
meteoroid environment problems of space flight structures... 3137	lenticular configuration, static stability and control characteristics... 11009
nonlifting reentry capsule in combination with rocket booster, static aerodynamic and control characteristics... 5565	lenticular-shaped, static longitudinal aerodynamic characteristics... 11008
nonlinear attitude control systems, techniques for analysis... 47	lifting configurations, aerodynamic and control studies... 11004
nonlinear structures, sinusoidal vibration testing... 19910	longitudinal aerodynamic characteristics of delta-wing configurations... 11010
nuclear, orbit-launched vehicle design, etc., for escape and planetary missions... 12849, 19908	modified half-cone 0.34-scale free-flying model, low-subsonic stability and control characteristics... 14545
oral hygiene for use in cabin... 5890	nonlifting static stability characteristics... 18125
orbit-launched vehicles, influence of weight parameters on propulsion requirements... 11020, 18135	square and circular plan-form, static longitudinal and lateral stability characteristics... 3115
payloads, methods of expressing mass unbalance... 11018	static longitudinal aerodynamic characteristics of wing and blunt-body shapes applicable for use... 10993
pilot-controlled simulation of rendezvous between spacecraft and commanded module having low thrust... 7270	
position in earth-space moon trajectories... 12878	
power... 5549	
pressure stabilized structures, theory... 11080	
Project Fire—	
configuration pressure distributions over forward portion... 7269	
surface pressure distributions at Mach numbers from 0.25 to 4.63... 19928	
Project Mercury capsule, static aerodynamic characteristics... 5563	
propellant tank, determining mass of liquid propellant in zero gravity... 7259, 14652	
publications, list... 14652	
reentry vehicles—	
ablation materials, investigation... 11019	
aerodynamic skip flight, guidance scheme using approximate solutions of trajectory equations to control, study... 16397	

# JANUARY-DECEMBER

Spacecraft—Continued	Entry
reentry vehicles—continued	
subsonic aerodynamic characteristics of disk re-entry configurations with elliptic cross sections and thickness-diameter ratios of 0.225 and 0.325	11014
Trailblazer I wind-tunnel tests with theoretical aerodynamics, etc	14583
winged configuration, effect of longitudinal and lateral controls on aerodynamic characteristics	11011
winged, static longitudinal aerodynamic characteristics at transonic speeds	14586
winged, with all-skid landing gear having yielding metal shock absorbers, landing characteristics	1294
winged, with deflected flat-type control surface, static longitudinal stability characteristics tested at high subsonic speed	21001
with retractable wings, wind-tunnel investigation at subsonic and low supersonic speeds	11007
reflectance of opaque coatings, integrating sphere for monitoring	9178
reliability, military-industry symposium, papers	8141
returning from moon, emergency mid-course navigation procedure	7291A
rocket-powered, noise measurements during captive and launch firings	1298
rocket vehicles—	
atmospheric ballistic technology	14567
effects of fin size, fin cant, and auxiliary rocket motors on 3 configurations at Mach numbers from 1.80 to 4.63	14579
Scout reentry vehicles, 5th-stage, longitudinal static stability at Mach numbers from 0.60 to 24.4	11033
Scout research vehicle, effects of simulated bending and 4th-stage size on local pressures and normal-force distributions at Mach number 3.10	12876
Scout vehicle, 5th-stage, heat transfer and pressure distribution data	11066
selection of space cabin atmosphere, oxygen toxicity	18162
similitude in thermal models	9163
simulators, steroid and catecholamine studies on pilots during prolonged experiments	16807
single stage vehicles, ascent from lunar surface	12852
skid-rocker landings—	
characteristics, investigation	11026
stability analysis	11027
sodium flash-vaporization facility, design, etc	11041
spacecraft and parawing combination, low-speed investigation of cable tension and aerodynamic characteristics	14584
spinning, use of inertia sphere to damp angular motions	1324
static stability investigation of proposed Project Fire vehicle and reentry package configurations	1295

Spacecraft—Continued	Entry
statistical model for synthetic wind profiles for design and launching criteria	14559
sterilization, proceedings of conference	1274
structural materials—research areas, recommendations and evaluations	21007
structural research problems for support of future space missions	18164
structures for space operations	5553
systems contractors, reliability program provisions	18129
toroidal tanks, frequencies and forces resulting from liquid sloshing	12858
tracking stations program, agreement with—	
Australia	11310
Bermuda	21135
Mexico	16594
Spain	21123
tracking systems, mathematical models and errors, theory, errata	3134
tracking, VHF-UHF missile-space-research radar with 150-ft. steerable antenna	12950
Trailblazer II 3-stage rocket vehicle having various fin configurations, static aerodynamic characteristics at low subsonic Mach numbers and angles of attack up to 28°	11062
trajectories, optimum low-acceleration for interplanetary transfers	3131
trajectory simulation applicable to stability and control studies of large multi-engine vehicles	18143
turboclectric power systems, alkali, metal, effect on turbine geometry	11047
USSR, voyage of Vostok-3, cosmonaut's account	19448, 20761
vehicle technology considerations for solar probe	11050
vehicles, Federal item identification guides for supply cataloging, supplements	3660
winged reentry configuration, water landing characteristics	10992
see also Satellites.	
Spaceometer, safety device to aid motorists, development, hearing	18951
Spacing-environmental relationships in slash pine plantation	8301
Spada, Benjamin, forest statistics for King County, Wash.	2311
Spaeth, David H., individual incentive prods Red China to change commune system	2133
Spain:	
doing business in Spain, report of 1962 U.S. Machinery Trade Mission	5059
passport visas, agreement	20186
tracking stations, agreement	21123
trade in cotton textiles, agreement	21131
trade, interim agreement relating to GATT	11305
west coast, sailing directions, change	14619
Spalt, Karl W., bark characteristics and fire resistance, literature survey	12195
Spanish-Americans, wage workers on U.S. farms, economic, social, and demographic characteristics	8144

# INDEX 1963

Entry	Entry
Spanish War Veterans, <i>see</i> United Spanish War Veterans.	
Spano, Ernest R., determination of cobalt and nickel in tungsten by combined ion exchange X-ray spectrographic method.	20965
Spare parts, <i>see</i> Repair parts.	
Spark plugs, aircraft, uneconomical utilization and premature disposal by Air Force Dept., GAO review	8324
Sparrow, E. M., heat-transfer characteristics of several radiator finned-tube configurations.	1279
Sparrow, Gene W., banking positions, effects on lateral and longitudinal ranges of hypersonic global reentry vehicle.	7274
SPASUR (U.S. Naval space surveillance system), <i>see</i> Naval space surveillance system.	
Spatial disorientation, current concepts and aeromedical implications	20309
Spatial distribution of neutron flux on surface of graphite-lined cavity	5940
Spatial non-stationary motions of solid medium with shock waves	1825
Spaulding, Seth, channels of communication	10062
Spawn, salmon riffle, interchange of stream and intragravel water.	4969
SPB series, <i>see</i> Statistical profiles.	
Speakers' guide for service spokesmen, power for peace, Armed Forces Day	8143
Special market study, releases	4202
Special reports, Earth Sciences Division	1434
Special Representative for Trade Negotiations, Office of: appropriations, 1964—	
hearings	11874
report	11848
Special text ST series	12962
Specialists, airman specialties, rank-order estimates of time required for cross-training	4401
<i>see also</i> types of specialists, or occupations.	
Specialization and automation in USSR machine-building industry	7130
Specific gravity:	
lodgepole pine in Intermountain Region	571
wood, silviculture in controlling	13191
Specifications, <i>see</i> Government supplies—Military supplies—also names of departments, etc., including specifications—also subjects.	
Specimen handling, diagnostic specimens, collection, handling and shipment	9337
Spectra	
absolute intensity measurement in vacuum ultraviolet region	18121
analysis of economic time series, techniques	16910
aurorae and airglow researches	3165
energy—	
of cosmic rays, Explorer XII instrumentation for study	12856
of electrons in outer radiation belt	7289
far infrared bibliography	12948
infrared—	
and vibrational assignments for some organometallic compounds	7590
ketones, ethers and alcohols between 15 and 35 microns	11474
Spectra—Continued	
infrared—continued	
oils, greases, additives, and related materials	20296
studies of oleic acid and sodium oleate adsorption on fluorite, barite, and calcite	9130
intermolecular electron transfer in tetrapyrrole pigments during pulsed illumination, USSR study	20811
limited, structure of functions etc., in communications theory, USSR study	8869
low frequency power spectrum of cosmic-ray variations, during IGY	9170
molecular, methods of calculation in molecular spectroscopy, USSR study	2973
signals with coincident frequency, increasing receiver sensitivity, USSR study	10503
spectral sensitivity of retina receptors in experiments with dichromates, USSR study	2858
thermoluminescent, of sodium chloride and hydroxide-free sodium chloride irradiated with 40-Mev alpha particles	9167
ultraviolet—	
absorption of SO <sub>2</sub>	19290
congeries of absorption cross sections for wavelengths less than 3000 Å	19895
duplasmatron as vacuum ultraviolet light source	19896
fluorescence of muscles, USSR study	12377
spectrally selective photodetectors	12870
vacuum, absorption and photoionization coefficients of propylene and butene-1	19898
vacuum, light sources	19897
vacuum ultraviolet photoionization detector	7288
Spectral lines:	
intensities, stellar spectral lines, method for computing formation	18172
spectral type theory, contribution	18172
Spectral study of luminescence of tissues of otorhinolaryngological organs, USSR	12375
Spectrochemical analysis, <i>see</i> Spectroscopy.	
Spectrochemistry, titanium, analysis	1244
Spectrographs, electron probe X-ray spectrograph, design, etc.	3074
Spectrography:	
analysis of cerium by carrier distillation technique	1231
optical emission, analysis of high-purity vanadium	7218
X-ray, determination of cobalt and nickel in tungsten	20965
Spectrometers:	
mass—	
investigations of atmosphere between 100 and 227 kilometers above Wallops Island, Va.	16387
M/E positions, measurement using rotating coil gaussmeter	11564
Materials Central, improvement	18448
rocket-borne, determination of atmosphere parameters	18123
6 inch radius for isotopic analysis of solids, liquids, or gases	9682
Stanford University, duty-free entry—	
law	17017
reports	13547, 15346



Entry	Entry
Spectrometers—Continued	Spencer, Bernard, Jr.:
neutron gamma ray, description... 7587	aerodynamic characteristics at
proportional counter, for solar	Mach numbers, etc., of blunted
X-rays..... 7618	right-triangular pyramidal lift-
satellite borne X-ray, scanning	ing reentry configuration em-
mechanism..... 1271	ploying variable-sweep wing
Spectrometry, measurements of gas	panels..... 7249
temperatures in arc heated jets	longitudinal aerodynamic charac-
and tunnels..... 20987	teristics at low subsonic speeds of
Spectrophotometers, analysis, use in	highly swept delta wing utiliz-
foreign criminal law, USSR	ing nose deflection for con-
literature survey..... 15666	trol..... 1289
Spectrophotometry:	longitudinal aerodynamic charac-
infrared, evaluation for composi-	teristics of delta-wing reentry
tional analysis of lunar and	configurations..... 11010
planetary soils..... 9189	low-wave-drag hypersonic body,
stellar, above atmosphere..... 21018	effects of cross-section shape
Spectroscopes, mobile laboratory for	on low-speed aerodynamic
reconnaissance and explora-	characteristics..... 19929
tion..... 10946	Spencer, Laura L., legal status of
Spectroscopy:	women in U.S., report for
analysis of high-purity beryllium—	Georgia..... 13133
mass, methods and uses..... 1817	Spencer, Richard N.:
molecular, USSR study..... 10773	antimony, minerals yearbook chap-
solutions, spectrochemical analy-	ter..... 19822
sis..... 14514	bismuth, minerals yearbook chap-
spectral analysis of high purity	ter..... 14490
metals, Hungarian study..... 10654	lead, minerals yearbook chap-
spectrochemical determination of	ter..... 1208, 19843
beryllium in mineral beneficia-	Spera, David A., elastic stress distri-
tion products..... 3090	butions in Cassinian domes..... 16370
Spectrum, <i>see</i> Spectra.	Sphalerite, chloridization by contact
Speculation:	with chlorides..... 20967
corn futures market, 1961-62..... 6056	Spheres:
cotton—	as decelerators at Mach nos. 1.57 to
futures trade..... 4240	4.65, aerodynamic characteris-
on call positions and transac-	tics ablating under constant
tions in spot cotton, weekly	aerodynamic conditions, study
report..... 4298	falling, drag measurements upper
cotton, wool, cottonseed oil, pota-	atmosphere density obtained..... 11479
toes, futures commitments of	Spherical harmonics, analysis, new
traders..... 3529	method audits verifications..... 16770
futures trading and open con-	Spicer, William S., Jr., panel presenta-
tracts—	tion, Dec. 11, 1962..... 1415
cotton..... 3747	Spices, foreign agriculture circulars..... 3720
cotton, wool, wool tops, cotton-	Spider wasps, <i>see</i> Wasps.
seed oil, soybean oil..... 3748	Spiegel, Zane, geology and water
eggs, potatoes, butter..... 3749	resources of Santa Fe area,
potatoes..... 3750	N. Mex..... 19321
soybean meal and cottonseed	Spillways:
meal..... 3751	and sluices, Allegheny Dam, hy-
wheat, corn, etc..... 3752	draulic model investigation..... 10092
grain futures trade..... 4241	John Redmond Dam, Grand (Neo-
Maine potato futures, trading..... 7815	sho River), Kans., hydraulic
wheat, corn, oats, rye, soybeans,	model investigation..... 2227
eggs, futures, commitments of	Spin (aircraft):
traders..... 3530	and recovery characteristics of
Speech:	North American X-15 air-
discrimination—	craft, analytical investigation
of hearing impaired individuals	and recovery..... 7239
in noise, its relationship to	Explorer XII, effect of solar radia-
other audiometric parameters..... 14918	tion pressure..... 18147
prediction of scores from other	1/20-scale model unswept-wing,
test information..... 4423	twin-engine, observation air-
test composed of CNC mono-	plane, investigation..... 5576
syllabic words..... 7634	T-37C qualitative evaluation tests..... 14904
intelligibility and talker-recog-	Spin (atomic):
nition tests of Air Force voice	intermediate nuclear, attenuation
communication systems..... 9615	coefficients for combined mag-
<i>see also</i> Voice.	netic dipole and randomly ori-
Speeches, <i>see</i> Addresses, lectures, etc.	ented electric quadruple inter-
Speed:	actions..... 7712-13
aviation record holders, 1906-61,	Spina blida, hone through research..... 16505
speed as factor in progress..... 8186	Spinal cord, injuries, authorizing ad-
farm tractors, etc., mechanization	ditional research, report..... 18882
problem, USSR study..... 8985	Spindle guard makes shaper safer,
<i>see also</i> Air speed.	more efficient..... 13984
Speegle, Katherine C., heat-transfer	Spindler, Evelyn B.:
measurements of 2 wing-body	giving food demonstration with
combinations, etc..... 7233	tips for TV, guide for exten-
Speir, Hugh B., characteristics of	sion workers..... 5837
nursing homes and related fa-	selected programs for improving
cilities, 1961 nationwide in-	teenage nutrition..... 20663
ventory, report..... 20103	

# INDEX 1963

Entry	Entry
Spindler, Pearl G., housing for migrant agricultural workers, labor camp standards-----	9035
Spine:	
birth defects, spina bifida-----	16505
vertebral numbers, variation in juvenile Atlantic menhaden-----	10201
Spinning, symmetrical bodies with nonconstant spin rates, method for approximating vacuum motions-----	9198
Spiny dogfish, <i>see</i> Dogfish.	
Spiny lobsters, <i>see</i> Lobsters.	
Spirit process, <i>see</i> Duplicating processes.	
Spirochaeta pallida, <i>see</i> Treponema pallidum.	
Spitzbergen, Norway, German glaciological expedition in 1962, East German report-----	8910
Spodumene, beryl-spodumene concentrates containing 10 to 30 percent beryl, treating by fluosilicate process-----	5480
Spokane, Wash.:	
occupational wage survey—departmental edition-----	16277
document edition-----	15168
Spooner, Robert B., nonuniform burn-up and poisoning effects in reactor and validity of uniform approximation-----	7229
Sport fisheries, <i>see</i> Fish and fisheries.	
Sport Fisheries and Wildlife Bureau: Branch of Wildlife Research, activities, 1962-----	17446
fishery and wildlife biologists, careers, brochure-----	4940
operation and management of fishery resources-----	4941
pondfish hatcheries, operation and management-----	12136
Sporting goods, Federal item identification guides for supply cataloging, supplements-----	3659
Sports:	
bribery in sporting contests, prohibit schemes, report-----	20588
participation by middle-aged and older workers, USSR study-----	20824
<i>See also</i> Fish and fisheries.	
Spray ejected from lunar surface by meteoroid impact-----	9182
Sprays and spraying:	
broadcast spraying, tests in killing 1st-year chamise sprouts-----	10228
distribution patterns from Stearman airplane flying at 50 feet-----	14835
insecticide, oil base for sprays in tobacco warehouses-----	7533
preplanting treatments for brushy old fields in southern Illinois-----	13986
rhododendron, control by basal spray-----	10217
Spreemann, Kenneth P., semispan tilting-wing configuration and effects of wing-chord propeller-diameter ratios at transition speeds-----	14560
Springfield, H. W.:	
activities of sheep on crested wheatgrass lambing range-----	4985
cattle gains and plant responses from spring grazing on crested wheatgrass in northern New Mexico-----	16758
Springfield, Ill., Capital Airport, weather observations, hourly, summary, decennial census of climate-----	14788
Springfield, Mass.:	
electric facilities of area, map--	516, 2266
water problems-----	19330
Springfield, Mo., Municipal Airport, weather observations, hourly, decennial census-----	20238
Springs, flow characteristics of 2 types in Wisconsin-----	6508
Springs (mechanism):	
wide temperature range bimetallic coil spring system, properties analysis-----	7598
Sprouting, reduced on pruned white oak trees with motor oil-----	13988
Spruce:	
Engelmann, lumber grade recovery in Colorado-----	12190
root, use in basketry by Alaska Tlingit-----	15632
Spur gears, <i>see</i> Gears.	
Sputtering, effects with hydrogen ions on total hemispherical emittance of metallic surfaces-----	5598
Squabs, raising-----	14855
Squadron Officer School, attendance, relationship to later officer effectiveness reports-----	9626
Squalus acanthias, <i>see</i> Dogfish.	
Squash, growing-----	4350
Squire, James L., Jr.:	
atlas of eastern Pacific game fishing-----	19227
distribution of tunas in oceanic waters of northwestern Atlantic-----	4952
Squirrel monkeys, <i>see</i> Monkeys.	
Squirrels, prefer cones from fertilized trees-----	12183
<i>see also</i> Ground squirrels.	
Srawley, J.E.:	
crack-toughness of sheet steels-----	11192
low temperature fatigue cracks as deliberate fracture origins-----	11168
resistance of crack propagation of high-strength sheet materials for rocket motor casings-----	3224
tensile, etc., properties of maraging steel compositions-----	18249
SRDS, <i>see</i> Systems Research and Developments Service, FAA.	
Sreekanth, Agaram K., relief-----	17263
SRS series-----	3369, 13092, 16623
SSC, <i>see</i> Ship Structure Committee.	
Staatz, Mortimer H.:	
beryllium exploration at Helen Beryl, etc., pegmatites-----	15608
geology of beryllium deposits in Thomas Range, Juab County, Utah-----	10286
Stability, lateral, trailer trains-----	21143
Stability of aircraft:	
accelerometer controlled rigid space vehicle, effect of propellant sloshing-----	20982
aerodynamic characteristics of several flat-bottom configurations at Mach 3.0 and 3.5-----	3111
airplane model with tail surfaces outboard of wing tips at Mach number of 2.01-----	5557
canard configuration, trapezoidal aspect-ratio-3 wing, effects of vertical location on stability and control-----	5556
delta-wing hypersonic stability and control behavior at angles of attack between 30° and 90°-----	7262
devices to improve static directional stability of unswept-wing model at Mach numbers from 0.8 to 2.2-----	10984
directional, lateral, longitudinal, static pressure-distribution investigation at Mach no. 2.01 of 45° sweptback-wing airplane model at combined angles of attack and sideslip, tabulated data-----	7232

	Entry
Stability of aircraft—Continued	
dynamic parawing glider towed model, investigation.....	7271
high performance, stability augmentation system, study of pilot's ability to control failures.....	1312
lateral and directional stability and control derivatives of supersonic airplane with low-aspect-ratio unswept wing and tee-tail, flight test investigation.....	14539
lateral control and dihedral effect of wing-body combination with variable-incidence triangular wing and wing-tip allersons at Mach number of 1.52.....	5500
lateral-directional, large 4-propellered STOL transport airplane.....	11053
lateral range control by banking during initial phases of supercircular reentries.....	1303
longitudinal, aerodynamic characteristics of 5th-stage Scout reentry vehicles at hypersonic speeds.....	11033
longitudinal and lateral, subsonic aerodynamic characteristics of disk reentry configurations with elliptic cross sections and thickness-diameter ratios of 0.225 and 0.325.....	11014
low-subsonic stability and control characteristics of 0.34-scale free-flying model modified half-cone reentry vehicle.....	14545
mechanical and trim augmentation on helicopter IFR capability.....	13100
scaled-speed elastic swept-wing bomber and fighter models coupled wing tip to wing tip, simulated flight investigation.....	5532
shell structures, instability..... static—	3138
airplane configurations with favorable lift interference at Mach nos. up to 5.....	1261
blunt-nosed 10° half-angle cone at Mach no. 15, free flight measurements.....	5566
characteristics of Blue Scout and Blue Scout, Jr., research vehicles at Mach nos. 2.29 to 3.75.....	14581
derivatives, wind-tunnel measurement of propeller whirl-flutter speeds and comparison with theory.....	18142
lenticular reentry configuration.....	11009
nonlifting reentry vehicles.....	18125
Project Fire space-vehicle and reentry-package configuration.....	1295
tests on blunted cone at Mach no. of 20.....	1301
static and dynamic airplane model with unswept wing and high horizontal tail, flat plate wings having leading-edge sweep angles of 70° to 84°.....	5538
hypersonic boost-glide configuration, free flight investigation at supersonic speeds.....	14564
static longitudinal—	18132
air-to-surface missile configuration.....	11003
blunted glider reentry configuration.....	11000
elastic canard-fuselage configuration measured in air and in Freon-12 at Mach numbers up to 0.92.....	16379

	Entry
Stability of aircraft—Continued	
static longitudinal—continued	
winged reentry vehicle with deflected flap-type control surface tested at high subsonic speed.....	21001
static longitudinal and lateral characteristics of square and circular plan-form reentry vehicles.....	3115
static longitudinal, and race, 3-stage missile configuration.....	10996
tailless fighter airplane, stability and control at subsonic and supersonic speeds, wind-tunnel investigation.....	14528
tailless missile configuration having 45° sweptback wing of aspect ratio 4, free flight investigation.....	10979
towed spheres, conical wings, and cones used as decelerators at Mach nos. 1.57 to 4.65, aerodynamic characteristics.....	11065
trajectory simulation applicable to stability and control studies of large multi-engine vehicles.....	18143
transtability concept, application to flutter of finite panels and experimental results.....	18153
X-15 airplane landing loads and dynamics.....	11015
YH-41, re-evaluation.....	20304
Stabilization ponds for treatment of industrial wastes, inventory and references material.....	16527
Stabilizers:	
missile—	
aerodynamic heating tests.....	11002
supersonic jet tests.....	5560
Stabilizers (voltage), see Voltage regulators.	
Staff development, see Administrative management.	
Staff judge advocate handbook.....	18546
Staff personnel administration, selected practices and issues.....	8187
Staff training, development, supervisor's job.....	17539
Staffing international organizations, report of Advisory Committee on International Organizations.....	20168
Staffing procedures and problems in Soviet Union, study.....	13808
print additional copies, report.....	15364
Stage, Albert R., specific gravity and free weight of single-tree samples of grand fir.....	17501
Stageman, Anne:	
hospital utilization studies, selected references annotated.....	3287
State and local surveys of nursing homes and related facilities, annotations of selected studies.....	11238
Stages and discharges of Mississippi River and its outlets and tributaries, 1961.....	16350
Staging presentation.....	3243
Stagnation point, hydromagnetic boundary layer, with arbitrary pressure gradient and magnetic field, analysis.....	11044
Stahl, R. W.:	
escapeways and other emergency measures in coal mines.....	1202
safety organization and activities of award-winning companies in metal and nonmetal mining industries.....	18076
Stainback, P. Calvin, pressure, etc., measurements on flat face of blunted 10° half-cone body.....	11028

# INDEX 1963

Entry	Entry
Stainer, Howard M., X-ray mass absorption coefficients, literature survey.....	12826
Stainless steel:	
clad compacted UO <sub>2</sub> powder fuel	
defected samples, erosion flow testing.....	16836
cladding from cold-swaged and rolled fuel rods, examination of metallurgical and mechanical properties.....	7695
PuO <sub>2</sub> -SS and PuO <sub>2</sub> -UO <sub>2</sub> reactivity, fast reactor fuel costs and temperature coefficients.....	18564
supersonic transports, research, progress report.....	12875
table flatware, Tariff Commission report.....	21140
tubing for fuel cladding, evaluation.....	5933
water-moderated arrays of uranium and stainless steel, ANPP code development program.....	126
welded joints, influence of heat treatment on corrosion, USSR study.....	5241
Stains and staining (microscopy):	
specific brightness of bacteria stained with fluorescent antibodies, criteria, USSR study.....	17689
Stakem, Thomas E.:	
remarks—	
Dec. 20, 1962.....	2263
Jan. 24, 1963.....	4901
May 9, 1963.....	10155
May 22, 1963.....	10158
June 3, 1963.....	12112
Stal' (periodical):	
translations.....	14270
Stall (aircraft):	
rotating, limits in supersonic turbofan engine.....	5525
Stall barns, see Barns.	
Stallings, Dale G., marketing western fruits and vegetables, long-term, outlook.....	10051
Stallings, James A., graphic summary of agricultural resources and production.....	11637
Stallings, Robert L., jr., helium concentrations downstream of vent exhausting helium at sonic velocity into supersonic stream.....	11063
Stallman, Robert W.:	
calculation of resistance and error in electric analog of steady flow through nonhomogeneous aquifers.....	5032
electric analog of 3 dimensional flow to wells and its application to unconfined aquifers.....	2353
Stalnaker, Wade O., small business enterprises in vocational rehabilitation.....	16644
Stambler, Howard V., employment outlook for oceanographers.....	9065
La Stampa (periodical):	
indexes.....	929
1068, 1151, 2489-90, 2585, 2616, 2934, 5122, 5160, 5279, 5390, 6694, 6804, 6860, 6932, 8439, 8443, 8504, 8561, 8804, 8905, 9008, 10470, 10641, 12272, 12319, 12507, 12584-585, 12688, 14207, 14292, 14392, 15776, 16023, 16065, 16256, 17605, 17607, 17728, 17756, 17818, 19413, 19424, 19500, 19596, 19657, 19691, 20830.	
La Stampa sera (periodical):	
indexes.....	929
1068, 1151, 2489-90, 2585, 2616, 2934, 5122, 5160, 5279, 5390, 6694, 6804, 6860, 6932, 8439, 8443, 8504, 8561, 8804, 8905, 9008, 10470, 10641, 12272, 12319, 12507, 12584-585, 12688, 14207, 14292, 14392, 15776, 16023, 16065, 16256, 17605, 17607, 17728, 17756, 17818, 19413, 19424, 19500, 19596, 19657, 19691, 20830.	
Stamper, John W., titanium.....	18111
Stampf, Rudolf A.:	
automatic picture transmission (APT) TV camera system for meteorological satellites.....	20985
Nimbus spacecraft and its communications system.....	5571
Stamps, see Food stamps—Postage stamps.	
Stanczyk, Martin H., oxidation leaching of copper sulfides in acidic pulps.....	7224
Standard industrial classification manual, supplement.....	9702
Standard plans for highway bridges.....	5701-4
Standard time, see Time.	
Standard X-ray diffraction powder patterns.....	11096
Standards and standardization:	
cataloging and standardization program, semiannual report.....	18927-928
classified list revised to Jan. 1, 1963.....	4509
commercial standard series.....	144
1857-58, 4511-13, 5958-62, 7727-31, 9703, 13259-260, 15026-27, 16869, 18613, 20338	
Defense Department—	
specifications and standards, index.....	19079
notice.....	8140
supplement.....	3779
standardization documents, supply classification listing.....	19078
standardization policies, procedures, etc., manual.....	10035
directory SD series.....	2119
6314, 12039, 19087	
Federal specifications and standards.....	9704
Federal specifications, standards, and handbooks, index.....	6447
supplements.....	3778
Federal standards.....	533-536
2281, 4931, 6444-46, 12125-129, 15510-512, 17411-442, 19211-218, 20680-681.	
guide.....	14014
Federal test method standards.....	537-538
2282, 8263, 13943, 20682	
military standards.....	2115-17
10042-43, 17348-350, 19081-83, 20618-623.	
minimum standards for approval of airplane simulators, civil air regulations, amdts.....	10106
Navy, specifications, standards, and qualified products lists, guide.....	21063
standardization manual M series.....	10035
20616	
standardization policies, procedures, etc., manual.....	20616
Standards Laboratory Conference, proceedings, 1962.....	18189
standards, publications, price list.....	18281
technical standard order TSO (series).....	8221, 13903
see also subjects.	

# JANUARY-DECEMBER

Entry	Entry
Standards Laboratory, Naval Weapons Bureau:	
instrument calibration procedures-----	9281-85, 16466-469
instrument calibration technique-----	9286-87
measurement system operation procedure-----	9288
Standing wave detector PRD 219-----	20007
Standing wave ratio indicator, IM-89/UR, Navy calibration program, technical manual-----	18262
Stanford University:	
mass spectrometers, duty-free entry-----	
law-----	17017
reports-----	15346
Stankiewicz, N., applying field-ion emission to electrostatic rocket engines-----	5585
Stanmeyer, William R., Antarctic stress and teeth-----	7192
Stannous fluoride:	
aqueous prophylaxis paste, laboratory performance-----	73
aqueous, topically applied, effect in prevention of enamel decalcification of addition of pyrophosphates-----	79
Stansberry, Robert R., Jr., rural fringe and urban expansion, case study of Prince Georges and Montgomery Counties, Md-----	19089
Stanton, Beryl E., way Farmer Co-operative Service works-----	10100
Staphylococcus, secondary invading, source in Salmonella infected mice exposed to acute cold-----	14909
Stark, John T.:	
geology and petrography of volcanic rocks of Truk Islands-----	8338
petrology of volcanic rocks of Guam-----	15611
Starkey, Maurice W., Oil Co., motor carrier accident-----	19367
Starliper, A. G., recovery of tin, tungsten, and other metals from tin smelter wastes-----	1245
Starostka, R. W., fertilizer attachment for tree-planting machine, progress report-----	10
Stars:	
B, boundary conditions-----	21021
Crab Nebula central star, magnetic field-----	1320
early type, kinematic studies, photometric survey, etc-----	21022
ephemeris, 1964-----	14486
faint stars in Southern Hemisphere, Soviet cataloging of-----	12352
field identification, effect of field of view-----	9165
models for stars of very low mass-----	19922
southern sky survey payload-----	7290
spectrophotometry above atmosphere-----	21018
stellar spectral lines, method for computing formation-----	18172
Starsinic, Donald E., components of population, 1950 to 1960, for counties, etc-----	1898
Starting and managing series-----	1491, 14690
Starvation, dietary conditioning for nutrient restriction in humans-----	1753
State aid, see Grants-in-aid.	
State and local government employment and payrolls-----	4205
State banks:	
Federal and State banking laws, rulings and interpretations, hearings-----	17165

Entry	Entry
State banks—Continued	
member banks of Federal reserve system, list-----	4927
supplements-----	4206
membership in Federal reserve system-----	
regulations-----	15506
weekly changes-----	3508
State boards and departments of education, see Educational boards and departments.	
State boards and departments of health, see Health boards and departments.	
State Department:	
appropriations, 1964-----	
hearings-----	11877
report-----	11848
Assistant Secretary, additional, authorize, report-----	13774
budget, 1964-----	
amendments, proposal-----	7870
decrease, proposal-----	7864
bulletin-----	3594
careers in Washington, D.C-----	16570
commercial policy series-----	5724, 11294, 16568
department and foreign service series-----	7433, 11295, 14703-704, 16570-571, 18324-325
educational and cultural exchange program-----	
American grantees, 1962 list-----	16572
report-----	18327
foreign operations appropriations, 1964, hearings-----	18918
Foreign Service Staff corps career opportunities-----	16569
general information-----	7433
general records, preliminary inventories-----	18183
Government information plans and policies, hearings-----	13650
International information and cultural series-----	1514, 14709, 18327
Latin American program, 1963-----	13070
news letter-----	3595
policies, etc, 1963, report to the citizen-----	11297
press releases-----	4095
proposed amendments to Foreign Service act of 1946, as amended-----	18937
publications, list-----	4184
security, administration, investigation, report and hearings, print additional copies, reports-----	9985, 11866
series S-----	9402-4, 11299
travel regulations, violations by U.S. citizens, hearings-----	17189
visa procedures-----	
hearings-----	2101
report-----	335
State farms:	
USSR-----	
basic capital of sovkhoses-----	8454
piece-rate and premium wage system of sovkhoses-----	2552
State finances series-----	7767, 9730, 16904
State forestry, see Forests and forestry.	
State Highway Officials, American Association of, see American Association of State Highway Officials.	
State of the Union, see United States.	
State variations in income of the aged-----	1500
State vector measurement-----	1316
Statements, see Addresses, lectures, etc.	
Staten Island, income, education, and unemployment in neighborhoods-----	7176



# INDEX 1963

	Entry
States:	
age discrimination prohibited in private employment, laws, May 1963	14446
agricultural conservation program, summary by States, 1961	1665
agriculture departments, directory, 1963	7529
anti-injunction laws, major provisions, discussion	9036
Blue Cross and Blue Shield plans, enrollment 1962	16563
brucellosis eradication activities	4219
census of population, 1960—	
occupation by industry	11640
State of birth	13307
certification of interstate milk shippers under State-PHS cooperative program	16516
child welfare programs organization	11644
climates	3399
climatic division, monthly averages, 1931-60, decennial census	14781
committees for children and youth, how-to-do-it	6012
constitutional and statutory restrictions on local taxing powers	4328
constitutional and statutory restrictions upon structural, etc., powers of local government	4329
cotton production, 1962 crop	13280
cotton varieties planted 1959-63	14825
county business patterns, activities covered by OASDI program	16889
debt, long-term, of State governments	154
dental radiological health activities	9357
distribution of public employment, 1962	9728
economic areas, census of population, 1960	11639
education agency publications in education of exceptional children and youth	13847
education AM and FM radio and educational television stations	10068
Education Dept. personnel for guidance, counseling, and testing, directory	19096
educational records and reports series, implementing handbook 3	8172
employee-retirement systems of State governments	18642
employees' health benefit programs	14663
employment agencies, private, laws regulating, map series	9037
employment and earnings statistics, 1939-62	14476
Executives on Aging, conference, 1962, proceedings	2359
explorers' routes, trails and early roads in U.S., maps, list	1192
farm employment, family and hired workers, 1950-59	16763
farm mortgage debt, estimates, 1950-62	12052
farm operators, cash expenditures for production supplies and equipment, 1960	2237
Federal grants—	
adult education, report	15276
air pollution control programs—	
hearings	17330
reports	13609
staff study	17333
air pollution control research, etc., extend act, hearings	11907

	Entry
States—Continued	
Federal grants—Continued	
commercial fisheries research and development act, 1963, report	13756
education—	
digest of laws	9929
history of legislative proposals, 1789-1962	9929
education and libraries, hearings	9930
educational television construction, rules and regulations	14038
Health, Education, and Welfare Dept	10303
higher education facilities act, reports	11798, 15280, 19021, 20474, 20492
highways, equitable apportionment of urban highway funds—	
hearings	13821, 15331
law	20438
reports	13615, 13620, 19018
highways, interstate system, completion—	
hearings	13821, 15331
law	20438
reports	13615, 13712, 19018
juvenile delinquency prevention and control, extend act—	
hearings	17324
report	17281
library services act—	
hearings	13646
report	15273
local review, hearings	17313
maternal and child welfare and combatting mental retardation—	
law	20437
reports	15275, 17118, 19017
migratory farm workers sanitation facilities—	
hearings	10021
report	11969
nursing homes for veterans—	
hearings	15334
report	15291
finances, reports on State and local government	16878
financial assistance, water resources planning, hearings	19061
fiscal capacity, measures and tax effort	3332
formulas for support of public 2-year colleges	386
fresh fruit and vegetable shipments	9525, 13136
geographical names, decisions list	5012
government—	
continuity in emergency	4829
education directory, 1962-63	2155
finances 1962—	
compendium	9730
summary	7767
regulation of drugs and related products, report	13569
health authorities, directory 1963	14659
health departments, salaries of dental personnel, 1962	9354
health officers, conference, 1962, with Surgeon General, PHS, and chief Children's Bureau, proceedings	18290
health requirements and regulations governing admission of livestock and poultry	18405
Hill-Burton State plan data for hospitals and related medical facilities, national summary, Jan. 1, 1963, reports and analyses	20102
home mortgages, insured, FHIA data, proposed homes	12109

# JANUARY-DECEMBER

ry

56

29

29

30

38

03

30.

92

31

38

18

31

38

18

24

81

46

73

13

37

17

21

69

34

91

78

61

32

86

36

12

29

55

30

67

69

59

54

90

05

02

09

## Entry

### States—Continued

household food consumption and dietary levels, survey	4355
housing characteristics, 1960 census, advance reports	3504
income tax, withholding from salaries of Federal employees, regulations	20210
infant mortality, 1960	13031
labor legislation enacted in 1962	3040
labor legislation, 1961-62, annual digest	16268
land-grant colleges and universities, Extension Service review (periodical)	3634
large-scale farming, census of agriculture, 1959, special reports	13305
laws, air pollution, digest	1404
legislation relating to higher education, 1962, survey	17396
preliminary	2167
legislatures, apportionment	4326
library services act, allotments	19093
marketing service programs	1615
medical assistance for aged, Kerr-Mills program, evaluation report	20603
merit systems, directory, 1963	15621
minimum-wage laws	21179
minimum-wage status	14805
model State economic development program (remarks)	4432
noncitrus fruit, production, use, value, 1961-62	18340
officials enforcing food, drug, etc., laws, directory	13970
payments to local government	20342
plans for financing pupil transportation	6323
plans under library services act, progress report	19119
population estimates—	
July 1, 1961 and 1960	161
July 1, 1962	18690
July 1, 1963	18691
population mobility and economic areas, census 1960	20363
population, provisional estimates, July 1, 1962	1896
programs for juvenile offenders, limitations	1925
promote commercial fishery research and development, hearings	12011
property tax, role in strengthening	20257
public airports affected by agreements with Federal Government, list	20658
public assistance, maximums and other methods of limiting money payments to recipients	10096
public assistance under social security act, cost standards for basic needs for old-age cases and families receiving aid to families with dependent children	3328
public schools, programed instructional materials, survey, 1961-62	10083
regulating fluid milk prices	354
requirements for interstate movement of plants, etc., guide	5802
safety codes, comparisons with ASA, charts—	
laundry machinery and operations	9038
power presses	3018
trucks, powered industrial	10887
window cleaning	16269
salary ranges of positions in employment security, etc.	616
10305, 19340	
school systems, statistics, 1959-60	8188

## Entry

### States—Continued

soil conservation districts, status of organization, etc.	3333-34
Southern, civil rights, public schools, 1962	1935
State and local government special studies	15079
State and local governments, occupational health services for employees, guide	18287
States and small areas, housing census detailed data—	
Alabama-Connecticut	20343
Delaware-Indiana	18644
Iowa-Massachusetts	20344
Michigan-New Hampshire	20345
New Jersey-Ohio	18645
Oklahoma-Tennessee	20346
Texas-Wyoming	20347
United States summary	18643
statistical programs, Federal-State cooperative	16292
summer annual forage grasses	4348
supervisors of pupil transportation, directory	2170
surplus property agencies directors, directory	8358
surveys of nursing homes and related facilities, annotated studies	11238
tax collection in 1963	16904
tax revenue—	
1962 calendar year	15079
Jan.-Mar. 1963	16903
Apr.-June 1963	20362
taxation on interstate commerce activities, investigation—	
expenses, reports	6120, 18877
extend time for filing reports—	
law	13416
reports	11807, 11987
trade and industrial education, supervisors, directory	2152
unemployment insurance laws and experience	13873
unemployment insurance laws, significant provisions, Nov. 15, 1962	2174
veterans employment, Federal-State cooperative program, report, July 1962-June 1963	17404
vocational education boards, digest of reports, 1961	8159
vocational rehabilitation agency effectiveness	11376
vocational rehabilitation program, handbook for medical consultants	9182
water-rights laws, etc.	1715
women workers, background facts	1595
see also headings beginning State—	
also names of States.	
Static commutator	5871
Static electricity, see Electrostatics.	
Static inverters, see Inverters.	
Static pressure, see Pressure.	
Station notes, Central States Forest Experiment Station	6481
Station papers:	
Lake States Forest Experiment Station	573-576, 6488
Northeastern Forest Experiment Station	10221
Rocky Mountain Forest and Range Experiment Station	4990-92, 10240
Southeastern Forest Experiment Station	6524-25, 8301-4, 10243-247
Stationery, House of Representatives, additional allowance, report	18874
Statistical abstract of United States: departmental edition	16905
document edition	17068
supplement, county and city data book, errata sheets	4577, 4673

Do not order from index; see indicated entry

Page 583

# INDEX 1963

Entry	Entry
Statistical design, <i>see</i> Statistics.	Status of world's nations----- 16574
Statistical profiles:	Statutes, <i>see</i> Law.
5 B redevelopment areas, SPB, se-	Statutes at large:
ries ----- 11690-699,	87th Cong., 1st sess----- 2268
13353-377, 15125-134	87th Cong., 2d sess----- 12118
redevelopment area, SP series----- 4655,	Stavropol'skiy Kray, RSFSR, re-
7811-12, 9789-90, 13378-379,	sources, industry and health
15133-137.	resorts, USSR study----- 1125
Statistical publications, <i>see</i> names of	Steam:
departments, etc., issuing pub-	steam-water flow, effect of heat ad-
lications.	dition in empirical correlation
Statistical Reporting Service:	of void fractions----- 1282
appropriations, 1964, Agriculture	wet, as reactor coolant, final re-
Dept., hearings----- 9921	port ----- 1833, 5949
career in agricultural statistics----- 7578	wet, under fog flow conditions, in-
periodic reports, list----- 4372	vestigation ----- 4497
reports, checklist----- 3510	Steam-electric plants, <i>see</i> Electric
SRS series----- 3369, 13092, 19623	power plants.
Statistical summary, <i>see</i> Agricul-	Steam generators:
ture—National Labor Rela-	nuclear, for merchant ship appli-
tions Board.	cation ----- 5923
Statistical theory of continuous self-	sodium heated, summary----- 15012
adjusting systems, USSR----- 6893	Steam power plants, equipment, Fed-
Statisticians:	eral item identification guides
agricultural, examination an-	for supply cataloging, supple-
nouncement ----- 9762	ments ----- 3655
analytical and survey, examination	Steam railways, <i>see</i> Railroads.
announcement, discontinuance	Steam turbines, <i>see</i> Turbines.
notice ----- 20381	Steamship conferences, <i>see</i> Shipping
career with National Center for	conferences.
Health Statistics----- 14657	Steamship Trade Association of Balti-
career opportunities in Agriculture	more, Inc.—Waterfront Guard
Department ----- 1686	Association, pension fund, qual-
mathematical, examination an-	ified trust----- 15206
nouncements ----- 6028	Stecher, Theodore P.:
statisticians and survey statisti-	interstellar radiation field----- 21019
cian, examination announce-	stellar spectrophotometry above
ment ----- 18737	atmosphere ----- 21018
training program, National Center	Stedman, R. L., total hexane and
for Health Statistics----- 16513	ethanol extractives of tobacco. 1639
Statistics:	Steel:
employment, etc., BLS seasonal	alloys, antifriction, use of de-
factor method----- 12791	pleted uranium as constituent
experimental—	basic iron and steel, industry wage
handbook ----- 18187	survey ----- 5450
planning and analysis of com-	bearing, in liquid oxygen, boundary
parative experiments----- 7379	lubrication characteristics----- 5589
special topics----- 9315	brittle fracture, drop-weight
standard techniques for analysis	test ----- 11173
and interpretation of enumerative	carbon and sulfur detected with
and classificatory data----- 5664	audiography technique----- 3080
Federal, for metropolitan areas, in-	companies, refusal to respond to
formation report----- 1613	subpenas, hearings----- 8125
Federal-State cooperative statisti-	continuous casting—
cal programs ----- 16292	foreign literature, bibliography. 7741
Federal statistical directory, 19th	2 years experience, USSR study. 2629
edition, 1963----- 13256	USSR studies----- 10411
mathematical methods for process-	corrosion due to alkali concentra-
ing data, USSR study----- 8697	tion in steam generating sys-
mechanization problems, USSR	tems, laboratory studies on
studies ----- 16083	LiOH at 316°C----- 3231
metallurgical research, statistical	electron beam welding for fabri-
design of experiments----- 14507, 18094	cation of ultra high strength
services of U.S. Government----- 15023	steel rocket motor cases, evalu-
statistical series releases, SEC----- 4208	ation ----- 9277
tables describing small-sample	extrusions, improved methods, etc.,
properties of mean, median,	for producing----- 9613, 18488
standard deviation and other	forging industry, outlook for 1963
statistics in sampling from	and review of 1962----- 4531
various distributions----- 14601	forgings, current industrial re-
world trade information service----- 2435	ports ----- 3574
<i>see also</i> Correlation (statistics)—	foundries, current industrial re-
Regression (statistics)—Vital	ports ----- 3574, 16897
statistics—also subjects.	high strength quenched and tem-
Statuary, <i>see</i> Sculpture and statu-	pered—
ary.	explosion tear test studies----- 12953
Status of Women, President's Com-	factors determining applicability
mission on, <i>see</i> President's	to submarine hull construc-
Commission on Status of	tion ----- 11190
Women.	high-strength sheet, crack tough-
	ness ----- 11192

Entry	Entry
<b>Steel—Continued</b>	
industry—	
outlook for 1963 and review of 1962	4523
output per man-hour indexes, methods and procedure for developing	12811
USSR, efficiency of oxygen converter steelmaking process, problems	946
iron and steel, mineral industry survey—	
annual	16326
monthly	3808
iron and steel scrap, monthly—	
final data	3809
preliminary data	3810
low temperature fatigue cracks as deliberate fracture origins	11168
maraging, tensile and impact properties	18249
mild—	
brittle fracture initiation	20124
crack propagation in low-cycle fatigue	14686
low-cycle fatigue behavior of axially loaded specimens	18304
minerals yearbook chapter	19840
pillings, protective coatings, test results	13135
plate, explosively formed, tensile properties	11169
polished plates and sheets, duty—	
law	17016
reports	13564
prices, unit costs, etc., increase, hearings	11732
production by electroslag remelting method, USSR study	19592
products, packaging, marking, and loading methods, recommendation of trade, amendments	4557, 13267
prospects for development of combined processes of continuous casting and rolling, USSR study	2556
radiotracer studies of cerium and sulfur distribution	14521
reactor structural material, radiation damage	11172
reinforcement, corrosion in porous concrete, USSR study	6701
scrap, minerals yearbook chapter	19841
ship-plate, effect of metallurgical variables on transition temperatures in drop-weight and Charpy V-notch tests	5715
stressed, effect of cadmium plating at elevated temperatures	5893
structural, fabrication, injuries and accident causes	1158
surfaces, protection with reinforced plastic coatings	3322
USSR, translations	2822
vacuum melting	3056
vapor plating of aluminum	20298
see also Stainless steel—Steel structures—also names of manufactured articles.	
Steel (USSR periodical):	
translations	14270
Steel castings, see Castings.	
Steel mills, products, 1962	20357
Steel structures, fracture analysis diagram procedures for fracture-safe engineering design	18250
Steele, L. E., radiation damage to reactor components	11172
Steelhead trout, see Trout.	
Steen, Harold K., relation between moisture content of fine fuels and relative humidity	19255
Steffen, R. M., directional correlation attenuation coefficient for combined magnetic dipole and randomly oriented electric quadrupole interactions	7712-13
Steffensen, James P.:	
merit salary programs	2164
staff personnel administration, selected practices and issues, school systems	8187
Steffernud, Alfred, place to live, yearbook of agriculture 1963	20291
Stehling, K. R., lunar landing propulsion considerations	5610
Steidley, K. David, table of ${}_2F_1(a, b; c; z)$ etc.	18139
Stein, K. C., catalytic oxidation of hydrocarbons	3051
Stein, Manuel, arrest of moving mass by attached membrane	14578
Stein, R. P., wet steam, etc., as reactor coolant, investigation	5949
Stein, Robert L., unemployment rates from household survey, definitions, uses, and limitations	12813
Steinberg, Erwin R., needed research in teaching of English	10076
Steinberg, Joseph, current population survey, report on methodology	11636
Stella Reorganized Schools R-I, Missouri, relief	7909, 13693
Stellarators:	
C-stellarator discharges, variation of neutral density with time	14988
use of magnetically compressed plasmas	7700
Steller sea lions, see Seals (animals).	
Stelluto, George L.:	
industry wage surveys—	
communications	1171
leather tanning and finishing	14478
pulp, paper, and paperboard mills	1170
southern sawmills and planing mills	12807
wood household furniture	16290
Stemple, Ruth M., author-subject index to Smithsonian annual reports, 1849-1961	5719
Stenographers:	
curriculum for manpower development and training program	2162
examination announcements	191, 7794, 18738, 20379
Step into action, guidebook for above-knee amputee	9356
Stephens, David G., coupled dynamic response of tank partially filled with liquid and undergoing free and forced planar oscillations	16408
Stephens, Joseph R., effect of oxygen on mechanical properties of tungsten	9155
Stepka, Francis S.:	
catastrophic fracture of liquid-filled tanks impacted by high-velocity particles	12848
temperatures and coolant pressure losses for cascade of small air-cooled turbine rotor blades	5528
Stepping stones to good member relations	8205
Steps ahead, report of conference on mentally retarded children	16918
Stereotaxic atlas of squirrel monkey's brain (Salmir sciureus)	7318
Sterilization:	
nursing home environmental health factors	13013
spacecraft, conference proceedings	1274

# INDEX 1963

Entry	Entry
Sterilization—Continued	Still-birth, fetal mortality statistics, 1960----- 11247
sub-sterilization doses of radiation, effects on storage life extension of soft-shelled clams and haddock filets, final summary----- 4486	Stilling wells, <i>see</i> Wells.
Stern, David, low frequency power spectrum of cosmic-ray variations during IGY----- 9170	Stine, P. T., operational performance of NRL thermistor-bridge gas leak detector and its sensitivity to various gases----- 3232
Stern, Robert L., address, Jan. 15, 1963----- 4651	Stink bugs:----- 14887
Stern, William L., woods and flora of Florida Keys----- 21041	Senn pest, general information----- 14887
Sternitzke, Herbert S., Mississippi forest resources----- 1475	tagging with radioactive isotopes, USSR study----- 17929
Steroids:	Stipp, Henry E.:----- 18065
parotid fluid responses to graded doses of corticotropin----- 14922	boron----- 18077
studies on pilots during prolonged experiments in space cabin simulator----- 16807	iodine----- 7288
urinary excretion, effect of high concentrations of carbon dioxide and diet----- 18505	Stoiber, A. K., vacuum ultraviolet photoionization detector----- 7288
Sterrett, Mary F., quadrennial supplement to cumulative index of congressional committee hearings, etc----- 13387	Stochastic methods, nonlinear closed-loop control systems with stationary stochastic inputs, analysis----- 19939
Stevens, H. W., approach roads, Greenland, 1956-57 program----- 10093	Stochastic processes, <i>see</i> Probabilities (mathematics).
Stevens, Ira M., feeder cattle pooling, etc----- 1702	Stock catalogs, <i>see</i> Catalogs—Government supplies.
Stevens, Lawrence N., remarks, Nov. 29, 1962----- 1378	Stock exchanges, transactions, statistical series releases, SEC----- 4208
Stevens, Richard F., jr., vanadium----- 14527	Stock funds, <i>see</i> Army Stock Fund.
Stevens County, Wash., mining methods, etc., Deep Creek Mine, Goldfield Consolidated Mines Co----- 14500	Stock ranges, <i>see</i> Range lands.
Stevenson, Adlai E.:----- 1795	Stock water, <i>see</i> Water supply.
statements—	Stock-water reservoirs, <i>see</i> Reservoirs.
Oct. 10, 1962----- 1577	Stocker, Frederick D., revenues and expenditures of State and local governments in Great Plains----- 4802
Oct. 23, 1962----- 1513	Stockholders, stock ownership, bank holding companies----- 9926
Oct. 23 and 25, 1962----- 9399	Stockman, Norbert O.:----- 3150
Dec. 21, 1962----- 9399	design of pump impellers using high-speed digital computer----- 3150
Stevenson, F. D.:----- 9136	variable thermal properties on one-dimensional heat transfer in radiating fins----- 19915
metal diaphragm apparatus for measuring vapor pressures, etc----- 7206	Stockpiling, <i>see</i> Strategic materials.
references to metal-halide vapor pressures, etc----- 1477	Stocks, registered on national securities exchange, list----- 13936
Stevenson, Harold W., small manufacturing firms, equity and long-term financing sources----- 1477	<i>see also</i> Securities.
Stevick, E. W.:----- 7438	Stockwell, Homer J., fall water supply summary, 1963----- 20138
Swahili basic course----- 14735	Stockyards:----- 3999
Yoruba, basic course----- 5024	P. and S. docket----- 3999
Stewart, Frederick H., marine evaporites----- 5024	packers and stockyards act—amend—----- 11871
Stewart, K. R., ray acoustical model of ocean using depth-sound speed profile with continuous 1st derivative----- 11178	hearing----- 11871
Stewart, Maxine, employment outlook for hospital administrators----- 20933	law----- 13435
Stewart, Potter, nomination, report----- 20528	reports----- 9897, 13717
Stewart, Richard R., development of manual for nuclear reactor simulators----- 15014	as it applies to—
Stewart, Robert E., waterfowl populations in Upper Chesapeake region----- 15536	auction markets----- 13140
Stewart, William H., community medicine, American concept of comprehensive care----- 12986	livestock dealers----- 13141
Stieff, L. R., algebraic and graphic methods for evaluating discordant lead-isotope ages----- 5022	livestock producers----- 13142
Stilina, A. I., technical (periodical): translations----- 8924	recordkeeping for livestock dealers----- 16754
Stiletto, Annie Z., relief----- 17081	regulation of livestock auction markets under hearings----- 9918
Still, George W., insecticide residues on grapes and in wine, studies----- 4337	what it is, how it operates----- 18441
	packers and stockyards resumé----- 18386
	posted under packers and stockyards act, list----- 14828
	public, livestock inspection, manual----- 1642
	Stoddard, Charles H., forestry and forest products in New Hampshire----- 1449
	Stoddard, Everett O., commercial egg-producing farms, New Jersey, 1962----- 10050
	Stokers (mechanical):
	Losch anthracite, performance in building-heating service----- 5477
	Stokes, Birney A., preparing shipments to Morocco----- 6618
	Stokes, Mary E.:----- 16276
	occupational wage surveys—
	Chicago, Ill----- 7167
	Columbus, Ohio----- 5444
	St. Louis, Mo.-Ill----- 5439
	Wichita, Kans----- 5439



# JANUARY-DECEMBER

	Entry
STOL, <i>see</i> Aircraft—Airplanes.	
Stomach:	
cancer, oncological help, USSR translations .....	6792
chemical bureaus and their treatment, USSR study .....	12496
importance in iodide metabolism during thyroid uptake tests ..	16789
Stone, Alan, Simuliidae names .....	9592
Stone, P. H., jr., static dischargers for jet aircraft .....	20297
Stone, Robert N.:	
forest area trends in Minnesota counties .....	15572
forest plantations of northern Lower Michigan .....	573
Stone, Robert W., Federal reserve open market operations in 1962 .....	10179
Stone:	
meteors, criterion for mode of ablation .....	14692
minerals yearbook chapter .....	19879
sandstone as dimension stone .....	16324
Stones River:	
engineer report—	
departmental edition .....	422
document edition .....	312
Stoppers:	
cork, temporary suspension of duty—	
law .....	11724
reports .....	4743, 9976
Storage:	
exterior facilities, serving family housing at Fort Dix, GAO report on expenditures .....	14010
marking, military standard .....	2115
military installations, flexible pavement design for open areas, engineering manual .....	4865, 19143
moisture and humidity effects on maintenance of quality of rough rice .....	9580
pumped, for hydroelectric power, bibliography .....	7474
supply facilities, Yards and Docks Bureau design manual, change .....	1601
<i>see also</i> name or classes of articles stored.	
Storage batteries:	
alkaline battery evaluation .....	5849
for future space vehicles .....	7594
cathode-anode couples for secondary batteries using molten salt electrolytes, investigation .....	14899
discharge equation of primary and secondary cells, theoretical design .....	18244
manufacture, employees earnings, Jan. 1962 .....	3041
nickel cadmium aircraft, unreasonable prices under Air Force Dept. contract with Sonatone Corporation, GAO report .....	17514
plate conversion to lead dioxide and sponge lead from pastes made of lower oxides .....	7369
sealed silver-cadmium, feasibility of use in space exploration ..	3145
vehicular, Federal standard .....	17442
Storage in major power reservoirs in Columbia River basin .....	4212
Stores:	
case studies of small retail stores ..	1456
department stores—	
credit, monthly report .....	3596
inventory price indexes .....	5451, 7170, 18042
merchandising data, monthly report .....	3597

	Entry
Stores—Continued	
department stores—continued	
sales—	
annual distribution by months ..	10177
distribution by departments ..	10178
indexes without seasonal adjustment, average monthly sales .....	10171-172
monthly report .....	3910
selected cities and areas, weekly percentage changes ..	4297
weekly index .....	4296
sales and stocks, monthly report ..	3911
stocks—	
indexes, without seasonal adjustment .....	10173-174
monthly report .....	3912
stocks-sales ratios .....	10175-176
food, pilot food stamp program effect on sales in Fayette County, Pa., and McDowell County, W. Va. ....	8145
grocery department operations, commissary stores, technical manual .....	16829
retail—	
advertising, bibliography .....	14688
advertising in small stores .....	1479
apparel and accessory, employee earnings—	
departmental edition .....	3029
document edition .....	2013
building materials, hardware, and farm equipment, employee earnings—	
departmental edition .....	3025
document edition .....	2009
buying for, bibliography .....	9385
drug and proprietary, employee earnings—	
departmental edition .....	3031
document edition .....	2015
food and grocery, employee earnings—	
departmental edition .....	3027
document edition .....	2011
food store layout, customer shopping behavior (paper) .....	15414
furniture, home furnishings, and household appliances, employee earnings—	
departmental edition .....	3030
document edition .....	2014
general merchandise, department stores, etc., employee earnings—	
departmental edition .....	3026
document edition .....	2010
produce operations, layout principles .....	9578
sales, weekly .....	4299
wholesale grocers services, opinions of food-service operators .....	1705
Storm drains, outfalls, stilling well design for impact-type energy dissipator, hydraulic model investigation .....	10091
Storms:	
coastal warning facilities charts—	
Cape Hatteras, N.C., to Brunswick, Ga. ....	11382
eastern Florida .....	3400
Eastport, Maine to Montauk Point, N.Y., 1963 .....	14776
Eureka to Point Conception, Calif., 1963 .....	11383
Manasquan, N.J. to Cape Hatteras, N.C. and Chesapeake Bay, 1963 .....	11384
Montauk Point, N.Y., to Manasquan, N.J., 1963 .....	13116
Morgan City, La. to Apalachicola, Fla., 1963 .....	5770

# INDEX 1963

Entry	Entry
Storms—Continued	Strains and stresses—Continued
coastal warning facilities charts—	liquid tension at incipient cavitation in venturi flow, effects of
Morgan City, La. to Brownsville, Tex., 1963	air content and water purity, 9146
Point Conception, Calif. to Mexican border, 1963	materials, stress gradient and stress biaxiality effect on behavior
Puerto Rico and Virgin Islands, 1963	mechanical properties of—
data, monthly	sheet alloys, influence on fluorine environment
hydrologically critical in California, meteorology	tungsten, effect of oxygen
northern California, 3-dimensional wind flow and resulting precipitation	metallic materials and elements for flight vehicle structures
sea, spectra of ocean waves and microseisms relation	metals, effect of state of stress on failure at various temperatures
small craft, gale and whole gale warning facilities charts—	nonlinearity in random vibration of structures
Great Lakes, Huron, Erie, and Ontario, 1963	postbuckling effects on flutter of simply supported rectangular panels
Great Lakes, Superior and Michigan, 1963	pressure stabilized structures, theory
vertical motions in clouds, USSR study	reactor materials, mechanical properties
see also Hurricanes—Magnetic storms—Tunderstorms—Tornadoes.	resistance of crack propagation of high-strength sheet materials for rocket motor casings
Story of Infant care	rock stress, determining
Stotz, K. C., plasma afterglows with application in nitrogen	room-temperature shear and compression tests of stiffened panels with integral or attached cooling circuits
Stout, Oliver O., manual for fumigation of Mexican fruits with ethylene dibromide	slow cycle strain fatigue in thin wall tubing
Stout, Virginia F., effects of ionizing radiation on lipids of fish	statically indeterminate structures, generally digital computer analysis
Stowell, Gene, U.S. Government purchasing, specifications and sales directory guide for selling or buying in Government market	statistical methods in nonlinear theory of elastic shells
Strack, William C., Fortran code for problems in space mechanics	steel—
Strain gages:	crack propagation in low-cycle fatigue
electrical, for tensile testing of paper	effect of cadmium plating at elevated temperatures
electrical resistance, performance at cryogenic temperatures	high strength quenched and tempered, explosion tear test studies
Strains and stresses:	low temperature fatigue cracks as deliberate fracture origins
brittle fracture initiation in mild steel	stiffened plates, torsional rigidity measurements
buckling stress of cylindrical shells, effect of initial imperfections	stiffened sheet containing sharp central notch, static strength prediction method
cylinders, ring-stiffened, buckling under pure bending moment and nonuniform temperature distribution	strength of pressurized cylinders in compression or bending, correlation with structural parameters, errata
deformation of metals and alloys, effect upon crystal structure, USSR study	stress corrosion for structural alloys at room and elevated temperatures
drill bit and rock, stresses under static loads	stress-relief cores, modulus of elasticity determined with biaxial device
dynamic stress concentration factors	stress-rupture and fatigue properties of iron, nickel, cobalt-base alloy, preliminary investigation of hydrogen effect
elastic state of thermal stress in thin flat plate of finite dimensions, determining	stresses on ships at sea, unmanned system of recording
elastic stress distributions—	structural design, emergency construction, engineering manual
for cylinder-to-hemisphere and cone-to-sphere junctions in pressurized shell structures	structures fabricated from filamentary materials, applications in aerospace vehicles
in Cassinian domes	tensile—
fatigue—	explosively formed mild-steel plate
behavior of materials under strain cycling	properties and sheet-bending fatigue of refractory metals at room temperatures
low cycle behavior of axially loaded specimens of mild steel	strength of paper, electrical strain gage for testing
filamentary structures	
hydraulic turbine parts, stress analysis	
internal stresses in manufacture of products from glass-base textile, USSR study	

	Entry		Entry
Strains and stresses—Continued		Stratigraphy—Continued	
tensile and impact properties of—		studies in snow and firn of Green-	
maraging steel compositions-----	18249	land ice sheet-----	2188
structural materials at tempera-		Stratosphere:	
tures from 20 to 300°K.-----	14598	atlas of monthly mean charts,	
thermal—		1955-59, July-December-----	4390
involving plastic flow, numerical		circulation, winter of 1961, from	
method for determining in		rocket firings over U.S.-----	16376
missile nozzles-----	3223	lower, aerodynamic conditions of	
stress and buckling, effects on		airplane buffeting, USSR study	
flutter characteristics of flat		rhodium 102, high-altitude tracer	
single-bay panels-----	1290	experiment-----	1732
true properties of brittle materials		water vapor, USSR translation-----	16262
to very high temperatures-----	9691	Stratton, Frances E., translation title	
tungsten-fiber-reinforced copper		list and cross reference guide-----	11582
composites behavior-----	19917	Straw, seed flax, potential for extend-	
underground opening, Climax Mo-		ing utilization-----	11431
lybdenum Mine, Colo., deter-		Strawberries:	
mination-----	3094	culture, south Atlantic, etc.,	
variable amplitude fatigue tests,		regions-----	1690
effects of high and low loads-----	3147	diseases-----	4351
variable-amplitude loadings effects		fresh, economic feasibility of radia-	
on fatigue crack propagation		tion-pasteurizing-----	19090
patterns-----	16380	Strawberry Hill quadrangle, Wyo.,	
X-15 airplane landing loads and		geology and uranium deposits-----	2340
dynamics-----	11015	Streams, <i>see</i> Rivers.	
Strass, H. Kurt, rocket-model investi-		Streets, District of Columbia, within	
gation of rolling effectiveness		urban renewal plan, expedite	
of fighter-type wing-control		closing, report-----	13730
configuration, etc-----	14532	<i>see also</i> Roads and highways.	
Strategic materials:		Strength of materials, static strength	
critical material stockpiles—		of stiffened sheet containing	
cost, future, ores, etc., hearings,		sharp central notch, predic-	
Hanna nickel contracts, hear-		tion-----	16407
ings-----	326	<i>see also</i> names of materials and ar-	
nickel, tungsten, and titanium		ticles.	
contracts, investigation, hear-		Strengthen Security of Free World	
ings-----	4772	Committee, report-----	9401
disposal of cadmium from national		Streptococci, group A, in throat cul-	
stockpile—		tures, detection by immuno-	
hearings-----	6188, 6190	fluorescence-----	12987
law-----	7827	Streptomycin, use in prevention of	
reports-----	6166, 6274	acute radiation sickness, USSR	
disposal of feathers and down from		study-----	997
national stockpile—		Stress (psychological), <i>see</i> Tension.	
hearings-----	18921, 18924	Stresses (mechanical), <i>see</i> Strains	
law-----	20435	and stresses—Vibration.	
reports-----	15361, 18840	Stretchers, aircraft litter installation,	
export to U.S.S.R. and other Soviet		dynamic test-----	13098
bloc countries, hearings-----	2099	Strikes and lockouts:	
Federal stockpile inventories, re-		final tabulations, 1962-----	10923
port-----	3415	right to strike concept, historical	
manganese stockpiling, Emergency		and legal development-----	18955
Planning Office and GSA pro-		west coast maritime strike im-	
gram, GAO review-----	10263	pect, report-----	18956
stockpile reports-----	6352, 12053	work stoppages—	
stockpiling, investigation, author-		Government employees, 1942-	
ization, report-----	6240	61-----	10893
Strategic significance of African raw		metropolitan areas, 1952-61-----	3023
materials in United States		metropolitan areas, 1952-62-----	16272
planning-----	1776	monthly release-----	4312
Strategy, <i>see</i> Military art and sci-		work stoppages, 1961, analysis—	
ence—Naval art and science.		departmental edition-----	1169
Stratigraphy:		document edition-----	274
and structure of Rainier and USGS		Strip-mined lands, <i>see</i> Reclamation of	
tunnel areas, Nevada Test		land.	
Site-----	19315	Strobridge, Thomas R., thermody-	
Baranof and southern Chicago		amic properties of nitrogen-----	3177
Islands, geologic mapping,		Strohbehn, Roger, graphic summary	
study (series)-----	10284	of farm tenure, cooperative re-	
China, regional tables-----	8898	port-----	1902
origin, etc., of deposits of Pleisto-		Strom, Gordon H., scale model studies	
cene Lake Bonneville-----	5019	on snow drifting-----	4840
outline, Communist China study-----	2739	Strong, Ann L., preserving urban open	
Pennsylvanian and lower Permian		space-----	11368
periods, areas between Brazos		Strontium:	
and Colorado Rivers, north-		chemistry of strontium in natural	
central Texas (series), title		water (series)-----	5029
page and contents-----	10277	minerals yearbook chapter-----	12840
Pennsylvanian and Permian rocks,		occurrence and distribution in natu-	
Kans-----	8334	ral water-----	5029
Pennsylvanian, southern anthracite		radiochemical separations by amal-	
field-----	5013	gam exchange technique-----	18600
		sorption by crandallite, studies-----	8333

# INDEX 1963

Entry	Entry
Strontium—Continued	Students:
stable, microquantities effect on mineral metabolism and uptake of SR-90, USSR study-----	aerospace periodicals, science services, list-----
12716	13864
Strontium chloride, thermodynamic properties from 0° to 300°K-----	age-grade school progress of farm and nonfarm youth, 1960-----
20971	17354, 20625
Strontium fluoride, thermodynamic properties from 0° to 300°K-----	Army Nurse Corps, education opportunities -----
20971	1815
Strontium isotopes:	college-----
osseous system changes in dogs, USSR study-----	Federal career directory--- 4623, 16945
2959	summer employment in Federal Government, 1961-----
Sr-90-----	print as Senate document, report -----
eliminating from organism, USSR study -----	6282
10637	undergraduate social work, field experience and summer employment, guides-----
Health and Safety Laboratory fallout program, quarterly summary reports-----	13044
4479, 14985	college graduates, career opportunities in Public Health Service -----
9680, 3279	12984
milk from Brainerd, Minn., Milkshed, factors influencing-----	Communist International youth apparatus -----
8991	17317
milk, rapid method for determining content, USSR study-----	District of Columbia schools, permit suspension or dismissal, reports -----
1842	9899-9900
earth's surface, summary and interpretation of world-wide soil sampling program-----	dropouts-----
uptake, effect of microquantities of stable strontium, USSR study -----	importance of getting facts, etc -----
12716	17368
Strontium oxide, heats and free energies of formation-----	motivations for leaving school-- rates among farm and nonfarm youth -----
5497	19095
Stroud, Lowell:	19088
low temperature phase equilibria of-----	15425
Hansford gas-----	elementary boarding-school grades, joint work of teacher and class advisor, USSR study-----
3099	2714
Hogback gas-----	employment, thinking about your first job, try Uncle Sam-----
18096	9754
Structural designs, see Architecture.	engineering, C&GS training program in photogrammetry-----
Structural fabric program-----	1952
16768	enrolled for advanced degrees, fall 1961, summary report on survey -----
Structural materials, see Materials.	4827
Structural steel, see Steel.	financial aids-----
Structural synthesis of symmetric waffle plate-----	Education Office publications available -----
3162	2168
Structure and propagation of turbulent Bunsen flames-----	environmental science and engineering, listing-----
1197	18284
Structure of wood-----	foreign, West German assistance, especially to students from Asia, Africa, and Latin America -----
12170	5365
Structures, see Buildings—Earthwork structures—Steel structures—Strains and stresses—Vibration.	German Democratic Republic students in Ukraine Interblock-----
Struelens, Michel, State Department security clearance case, report -----	17938
335	graduate, in clinical psychology, opportunity in Army Medical Service -----
Struthers, Robert E., role of irrigation development in community economic structure, Grand Valley trade area, Colo-----	117
13035	higher education-----
Stuart, D. G.:	basic charges, 1962-63-----
activation, etc., of shivering during septal and hypothalamic stimulation -----	19101
11492	careers in Interior Department directory -----
anatomy of hypothalamus and its connections -----	623
11489	statistics, 1957-58-----
anti- and pseudo-Parkinson drugs, effects on shivering-----	2144
11493	important message, Ability Counts - Contest, announcement-----
decebration, etc., effects on shivering -----	1157
11491	Iraqi, internal troubles, report-- job opportunities, mechanics and repairmen -----
18468	20937
nervous control of shivering-----	Korea, student movement, nature and direction-----
11494	10750
septal and hypothalamic lesions effects on shivering-----	learning, does grouping according to ability make difference? -----
11490	8161
septal and hypothalamic stimulation of unanesthetized cats-----	loans, national defense education act of 1958, program, and participating institutions-----
shivering and temperature regulation -----	1962-63 ----- 377, 10075
18469	1963-64 ----- 17381
Stuart, Lyle, testimony-----	19062
Stubbs, Sandy M.:	public schools, large systems, 1959-60, current expenditures per pupil-----
landing characteristics of reentry vehicle having canted multiple-airbag load-alleviation system-----	2150
16401	pupil marks and school marking systems, bibliography-----
skid-rocker landing characteristics of spacecraft model-----	19115
11026	pupil transportation, statistics, 1961-62 -----
Stuckl, Roland, study of SBA financial assistance in Utah-----	19120
1467	
Student-learners, employment, pursuant to Fair labor standards act -----	
14771	

# JANUARY-DECEMBER

	Entry		Entry
Students—Continued		Sublimation :	
secondary school—		thermionic diodes, chemical regen-	
identification and development		eration -----	16392
of talent -----	19094	vacuum, radiant heat component	
summer science training pro-		effect on heat transfer -----	18179
grams, 1963 -----	3199	Submarine boats :	
Soviet news reports tension be-		atmosphere experiences -----	7188
tween Komsomol youth and		hull construction, factors determin-	
foreign students -----	10807	ing applicability of high	
student manual, SM series -----	13319	strength quenched and tem-	
summer trainee, Weather Bureau,		pered steels -----	11190
report 1962 -----	16691	nuclear powered—	
trainees—		atmosphere purification and con-	
examination announcement, vet-		trol, chemical research status -----	11165
erinarian, summer employ-		atmospheres, analysis and re-	
ment -----	20385	moval of organic contami-	
travel expenses, when appointed		nants -----	11162
to positions where manpower		components, Westinghouse sub-	
shortage exists, amend act—		contracts, GAO investigation	
hearing -----	15313	into pricing -----	2321
law -----	18787	radio rescue buoy, electrical and	
reports -----	11954, 18853	radio design considerations -----	11170
transportation—		smoke and illumination signals,	
State plans for financing -----	6323	handling and operation in-	
State supervisors, directory -----	2170	structions -----	7372
undergraduate, superior mathemat-		supply management of equipment	
ics students, honors programs		and spare parts in Navy Dept.,	
USSR—		GAO review -----	594
awards -----	15740	USSR studies -----	19464
chemistry courses for developing		Submarine cables, data from car-	
dialectic-materialistic world		riers' reports -----	3990
outlook -----	17580	Submarine medicine, <i>see</i> Medicine.	
Studia geophysica et geodaetica		Submariners :	
(periodical) :		enlisted submarine school gradu-	
translations -----	7065	ates, follow-up study on atti-	
Studies (North Vietnam periodical) :		titude, performance, and	
translations -----	12534, 17704, 17763	achievement levels -----	9103
Study of roles and missions of Coast		fleet ballistic missile submarine,	
Guard -----	15120-121	prediction of adjustment to	
Stumm, Edwin C., Silurian corals		prolonged submergence—	
from Moose River synclinori-		background variables -----	7198
um, Maine -----	6556	objective tests -----	7199
Stumpff, Karl :		relationship of breathholding abili-	
calculation of ephemerides from		ty, etc., to performance in	
initial values -----	1277	pressure chamber, etc. -----	7189
Hill's lunar theory -----	7253-54	Submerged land, <i>see</i> Land.	
LaGrange's theory of three-body		Subsidence (earth movements) :	
problem -----	3129	San Manuel Mine, Pinal County,	
long-period motion of the Trojans		Ariz., surface subsidence mea-	
as restricted three-body prob-		surements -----	9131
lem, Thuerling's theory -----	12847	Subsidies, <i>see</i> names of commodities,	
Stuntz, Stephen E., speech-intelligi-		industries, etc.	
bility, etc., tests of voice com-		Subsistence :	
munications systems -----	9615	Federal Item Identification guides	
Sturman, John C., micropower trans-		for supply cataloging, supple-	
istor logic circuits -----	5573	ments -----	3657
Styrene, industry, water require-		supplies authorized for issue and	
ments -----	12231	sale in commissaries etc.,	
Styrene-butadiene rubber, industry,		Army and Air Force regula-	
water requirements -----	12231	tion -----	20325
Subarctic region :		Subsonic speed, <i>see</i> Air speed.	
evaluation report—		Subtropics :	
carrier, Trackmaster -----	1571	anticyclone formation, Czecho-	
transporter, Nodwell -----	1572	slovak study -----	7066
northern operations, field manual—		USSR southern regions, acclima-	
transporter, Rolligon Mark 4,		tization of man -----	20773
subarctic evaluation -----	5756	Suburbs, shopping centers, bibliog-	
Alaska -----	5754	raphy -----	18308
Subcooled boiling heat transfer under		Subversive activities, <i>see</i> Un-Ameri-	
forced convection in heated		can activities.	
tube -----	9156	Subversive Activities Control Board :	
Subcritical reactors, <i>see</i> Reactors		appropriations, 1964—	
(atomic).		hearings -----	11874
Subdivision of land, <i>see</i> Land.		report -----	11848
Subject headings :		organization and rules of proced-	
Armed Services Technical Infor-		ure -----	7466
mation Agency—		report, 1962 -----	3373
chemical thesaurus -----	1792	Success before countdown, 2d annual	
thesaurus of descriptors -----	1793	report of President's Missile	
Library of Congress -----	4214	Sites Labor Commission -----	20083
medical -----	3776		
National Agricultural Library, list.			
National Library of Medicine cata-			
log -----	3892		



# INDEX 1963

Entry	Entry
Sudan:	
boundary studies—	
Central African Republic.....	20161
Chad .....	20160
Libya .....	20155
United Arab Republic, Egypt.....	20163
educational data .....	15428
market for U.S. products.....	10345
Suddath, Jerrold H., use of inertia sphere to damp angular motions of spinning space vehicles .....	1324
Suehs, Erwin A., relief .....	13498
Sugar:	
and international trade (address) .....	1727
Cuban, loose storage and transportation .....	2892
determinations of prices, shares, and wage rates .....	4162
exporting countries, data .....	15296
foreign agriculture circulars .....	3720
imports from Communist Zone damage Bolivian production, translation .....	2686
industry in Ukrainian SSR, development and distribution, USSR study .....	19597
international agreement of 1958—report .....	20531
text .....	20511
invert, refractive indices and densities of aqueous solutions .....	12897
payments and quotas, statutes, compilation .....	1682
prices, investigate, hearings .....	12016
requirements and quotas .....	4163
statistics and related data .....	14892
sugar reports .....	4215
supply requirements balance (address) .....	9556
Sugar maple, see Maple.	
Sugar pine, see Pine.	
Sugarcane, drainage system .....	18305
Sugarcane beetle, see Beetles.	
Suggestion systems, Bureau of Ships shop practice suggestions .....	13258
Suicide among VA hospital patients with malignancies .....	9478
Suitability of tubed foods for in-flight feeding .....	4394
Suits:	
fitting coats and suits .....	13167
men's, how to judge quality .....	18425
women's and misses', industry wage survey .....	14477
Sulfates:	
differential sulfatizing process for recovery of ferrograde manganese .....	5487
halophile sulfate-reducing bacteria, effect of freshening strata waters on development, USSR study .....	10383
Sulfatization of manganiferous carbonate slates in fluidized bed reactor .....	16330
Sulfides, rare earth and actinide, crystal-chemical properties, USSR study .....	1061
see also sulfides by name, e.g. Lead sulfide.	
Sulfur:	
compounds—	
identification of 2,2,5-trimethylthiacyclopentane and 2,2,5,5-tetramethylthiacyclopentane in Wilmington, Calif., crude oil .....	14517
microhydrogenation identifying technique .....	1238
polar material in distillate fuel, separation, etc. ....	19869
Sulfur—Continued	
fuel distillates containing, influence of products of combustion on construction materials of gas turbines .....	18512
Kara Kum deposits, USSR microbiological investigations .....	14429
minerals yearbook chapter .....	19880
molten, gas explosion hazards associated with bulk storage .....	7221
native and recovered, mineral industry survey, monthly .....	4216
production, etc., 1962 .....	18108
preliminary report .....	5503
radiotracer studies of distribution in steel .....	14521
Sulfur dioxide:	
conversion into sulfuric acid by autooxidation in mechanical cells .....	12835
dissociation energies .....	19890
removing from hot flue gases, process development .....	20964
ultraviolet absorption .....	19890
Sulfuric acid:	
conversion from sulfur dioxide by autooxidation in mechanical cells .....	12835
current industrial report .....	13297
processes for producing alumina .....	10962
Sullivan, G. V., extraction of manganese from low-grade dolomite materials by roast-leach process .....	3079
Sullivan, R. J., hot cycle research aircraft .....	14750
Sulphur oxides, SO <sub>2</sub> , dissociation energies .....	19890
Sumac, see Poison sumac.	
Sumby, William H., comparative evaluation of vibrotactile warning signal potential .....	1769
Summer annual forage grasses in United States .....	4348
Summer employment in Federal agencies .....	4628
Summer student trainee report 1962 .....	16691
Summit County, Colo., Tennesse Range, geology of northern part .....	19300
Sumner, Irving E., frequencies, etc., resulting from liquid sloshing in toroidal tanks .....	12858
Sun:	
ephemeris, 1964 .....	14486
formation .....	21015
low energy gamma-ray detector .....	9172
particle ejection, possible mechanism, USSR study .....	2469
protons, rocket observations during Nov. 1960 .....	21013-14
setting, as seen from space, effect of refraction .....	12862
solar activity effect on blood, USSR study .....	10661
solar flux incident at top of atmospheres of earth and neighboring planets for spectral region 50 Å to 3000 Å .....	19891
solar light, inducing carbon monoxide in closed environments .....	18506
solar origin of atmospheric xenon .....	5607
solar radio bursts, type IV, geomagnetic storms, and polar cap absorption (PCA) events .....	20132
solar variation and weather .....	21108
sunshine, mean total hours, monthly and annual, national atlas sheet .....	21176
total eclipses, radio measurements .....	1738
vehicle technology considerations for solar probe .....	11050
see also Sunspots.	
Sun journey, story of Zuni Pueblo .....	10308

# JANUARY-DECEMBER

	Entry
Sunset Crater National Monument, general information.....	11125
Sunshine, <i>see</i> Sun.	
Sunspots:	
coolness, theoretical model.....	19921
relative position of sunspots and flares.....	14694
<i>see also</i> Solar flares.	
Super. Ann. relief..... 9848, 13398,	13638
Supercompressibility factors for helium-nitrogen mixtures.....	9123
Superheaters:	
boiling water-separate superheat reactor plant, 600 MWe, design study.....	7696
EVESR nuclear superheat fuel development project, reports..... 7698, 9678, 9688	
nuclear superheat meeting.....	9688
nuclear superheat project—	
12th quarterly report.....	16837
13th quarterly report.....	16838
Superior, Wis.:	
Duluth-Superior Harbor wave action and breakwater location, hydraulic model tests.....	4874
port, harbor conditions, etc.....	10089
Superior, Lake:	
iron ores.....	1243
ports, harbor conditions, etc.....	10089
small craft, gale and whole gale warning facilities chart, 1963.	13130
Superior Atlanta Manufacturing Co., Inc., accident.....	14077
Superior National Forest, Boundary Water Canoe Area, visitor reaction to timber harvesting.....	6509
Supermarkets:	
customer shopping behavior and store layout (paper).....	15414
retail produce operations, layout principles.....	9578
Superphosphates, <i>see</i> Phosphates.	
Superpressure balloon for constant level flight.....	59
Supersonic flow, <i>see</i> Flow.	
Supersonic inlets, <i>see</i> Air inlets (aircraft).	
Supersonic speed, <i>see</i> Air speed.	
Supervision, <i>see</i> Supervisors.	
Supervision for quality education in science.....	4828
Supervisors:	
Army Department, guide to job instruction, civilian personnel pamphlet.....	18541
concept of supervision (address).....	20665
development program, basic course—	
career management.....	4450
health and sick leave.....	4448
job instruction training.....	4445
performance appraisal.....	4446
personnel, selection and utilization.....	4444
position and pay management.....	5909
recognition of employees.....	4447
role of supervisor.....	4443
safety.....	4449
farm management, examination announcement.....	16956
job, staff development.....	17539
school library supervision in State and local school systems.....	4823
skills of management and supervision, analysis and inventory.....	10103
State, of pupil transportation, directory.....	2170
supervision for quality education in science, conference 1962, report.....	17395
Supplemental appropriations and estimates, <i>see</i> Appropriations.	

	Entry
Supplies, <i>see</i> Agricultural supplies—	
Dental supplies—Government supplies—Hospital apparatus and supplies—Medical supplies—Military supplies—School supplies.	
Supply and demand:	
demand and price situation.....	3591
forest products, 1963.....	20289
hogs, factors affecting supply.....	4377
sugar supply requirements balance (address).....	9556
world newsprint outlook through 1965, report.....	20479
Supply catalog, <i>see</i> Federal supply catalog—Military supplies.	
Supply facilities, design manual, change.....	1601
Supply functions for cotton in Imperial Valley, Calif.....	8155
Supports, horizontally supported planar surfaces, classification bulletin.....	7383
Suprarenal bodies, <i>see</i> Adrenal glands.	
Supreme Court:	
Associate Justice, nomination of Potter Stewart, report.....	20528
cases adjudged—	
Arizona v. California, et al., water rights controversy.....	11920
Court of Claims cases.....	8130,
15404, 17336	
official reports.....	3984
tax cases, Oct. term 1961.....	9951
United States reports.....	1567,
3374, 20196, 21139	
clerk, payment of salaries by marshal, report.....	17115
journal.....	4222
Judicial Conference report containing amendments and notes of Advisory Committee.....	6087
Justices' widows, increase annuities, report.....	20598
rules of civil procedure for district courts, adopted.....	4717, 7857
Supreme Court Building, District of Columbia, acquisition of grounds, reports.....	13923, 13714
Suranyi-Unger, Theodore, jr., current projects on economic and social implications of science and technology, 1962.....	9250
Sureties, <i>see</i> Guaranties and sureties.	
Surface currents of Lake Michigan 1931 and 1932.....	10199
Surface tension, solids and liquids, measurement, USSR study.....	5326
Surface water, <i>see</i> Water.	
Surfaces:	
fabrication-type roughness effect on transition of ogive-cylinder models.....	16400
phenomena in metals and alloys problems, USSR study.....	8513
planar, horizontally supported, classification bulletin.....	7383
screw, isometric deformation.....	11079
Surgeon General, Public Health Service, <i>see</i> Public Health Service.	
Surgeon Generals' Consultant Group on Nursing, report.....	7414
Surgery:	
anesthesia and lung surgery, USSR studies.....	17979
anesthesia for operations, USSR study.....	18011
Chinese journal, articles.....	10437
Chung-hua wak'ko Tsa-chih (periodical), excerpts and tables of contents, translations.....	912
coagulating blood system after infusion of protein blood substitute BK-8, USSR study.....	16157

# INDEX 1963

	Entry		Entry
Surgery—Continued		Surveys, <i>see</i> Community surveys—	
convalescence, July 1960–June 1961	14676	also subjects of surveys.	
experimental surgery and anesthesiology (USSR periodical)...	658, 2527	Survival:	
neurosurgical clinic, uses of isotopic myelography, USSR study...	16112	airport disaster control guide...	1783
oral—		families on guard against accidents	20095
impacted teeth, adrenocortical responses in patients...	7639	family food stockpile for survival...	14859
stress in dental patients, effect of time of day on adrenocortical response	75	inflation components of personal equipment for astronaut body instrumentation and survival at sea, development...	3119
third molar impaction removal, measurement of responses...	16792	knowledge for survival, newsletter to extension program leaders...	8227
tooth impaction, identifying overlyanxious patient	72	medical self-help training	21089
thoracic, polyvinyl use	19391	motor transport emergency preparedness	14078
treatment—		personal and family, civil defense adult education course student manual	11656
burn cases, USSR studies	17883	pocket pen flare, evaluation	11506
deep thermal burns, USSR study	893, 2499	protection against fallout radiation in simple structure	16861
fractures, tumors and ligaments, USSR study	15731	rural fire defense preparation	4370
USSR—		sense, determination, preparation, and skills, Army pamphlet	18547
all-Russian congress, report	20922	simulated trek from confluence of Anaktuvuk and Colville Rivers to Arctic Coast	11504
experimental, translations	15736	you can survive, rural defense fact sheets	10128–147
thoracic, translations from Grudnaya khirurgiya	6808, 10745	your livestock can survive fallout from nuclear attack	4369
translations from Khirurgiya	2676, 2712, 6703	Survival kits, <i>see</i> Aircraft survival equipment	
translations from Vestnik khirurgii	1054, 2463, 2678	Survivors insurance:	
translations of Kukovodstvo po khirurgii	12368	social security rulings	4195
World War II, thoracic surgery— <i>see also</i> Exodontia—Grafting (physiology).	5920	your social security, basic information	11281
Surnames, <i>see</i> Names (personal).		<i>see also</i> Old-age, survivors, and disability insurance.	
Surplus lines insurance	15395	Sutherland, Charles F., Jr., forest products marketing, market for wood pallets in auto industry, case study of Ford Motor Company	575
Surplus property:		Sutherland, Doyle F., variation in vertebral numbers of juvenile Atlantic menhaden	10201
disposal—		Sutherland, E. C., properties of sintered wrought tungsten sheet at very high temperatures	5569
agreement with Korea	11318	Sutton, Alex G., Jr., technique for mapping terrain, microgeometry	2230
airport property, release from restrictions, Federal aviation regulations	2249	Sutton, Doris C., beryllium determination in urine	14984
at selected installations of General Services Administration and other Federal agencies, GAO review	595	Svehla, Roger A., viscosities, etc., of gases at high temperatures	19945
Federal personal, for public airport purposes	482	Svendsen, K. L., United States magnetic tables, for 1960	1954
State agencies directors, directory— <i>see also</i> Personal property.	8358	Sverdlovsk, Russian SFSR, development of modern city, USSR study	653
Surplus Property Utilization Division, directory	8358	Swahili language, Foreign Service Institute, basic course	7438
Surrey, Stanley S.:		Swalley, Frank E., thermal radiation incident on earth satellite	3142
remarks—		Swamplands, cutting methods in growth of mixed conifers	15579
Feb. 28, 1963	7501	Swanson, Howard E., standard X-ray diffraction powder patterns	11096
Mar. 18, 1963	7496	Swanson, Lynn D., short-term juvenile problem institutes for police, list	1926
Oct. 11, 1963	20209	Swanson, Robert H.:	
Nov. 8, 1963	21150	temperature measurement setup, circuit for simultaneous recording of millivolt output	6517
Survey of current business monthly	4223	thermistor bridge for use with null balance recorders	6516
Surveying:		Swanson, Vernon F., flotation of ilmenite from Virginia saprolite, etc.	5498
desert regions shifting sand topography, methods, Communist China study	2482		
electronic geodetic trilateration, side computation by circular surveying system, Polish study	7004		
Hungary—			
current problems	12677		
State Survey and Mapping Bureau's role	7003		
publications, price list	3265		
restoration of lost or obliterated corners, etc.	16301		
Surveying Instruments, <i>see</i> Phototachymetry.			
Surveyors, surveying aid and technician, examination announcements	4612, 7782		

# JANUARY-DECEMBER

	Entry		Entry
Swartout, James T., effect of number of piles on tear resistance of paper	15561	Switchboards, apparatus, current industrial reports	15070
Sweat, see Perspiration.		Switches, see Electric switchgear.	
Sweden:		Switchmen's Union of North America, emergency board report	12082
civil aviation, survey	5985	Switzerland:	
Communist Party, controversy within	14162	boundary studies—	
economic developments, 1962	8399	France	20156
education exchange program financing, agreement	21122	Italy	20157
export to, market for U.S. products, trade mission report	17565	certificates of airworthiness for imported aircraft, agreement	3362
gazetteer, official standard names	19290	economic developments, 1962	8398
homes for aged offer ideas for Americans	14649	gas appliances, household and commercial, U.S. market	13264
interchange of patent rights and technical information, agreement	1547	import tariff system	12255
living conditions	2389	patents, translated	18635
patent and trademark regulations	5075	press comments on Sino-Indian dispute, etc.	2768
report of mission to, President's Panel on Mental Retardation	14651	protocol to GATT, agreement	18330
sending gift packages to	2415	reciprocal trade agreement, modification	11302
Wallenberg affair unsettled, USSR	16176	sending gift packages to	2416
Sweeney, J. S., design for analog computer, quickening demonstration	11156	trade agreement	18335
Sweeney, John W., mineral industry of Iowa	20957	Sycamore, comparison of growth and survival between seedlings and cuttings	17499
Sweet potatoes, see Sweetpotatoes.		Symbols:	
Sweetclover, aphid resistance sources in species of Mellilotus	18393	electrical and electronic, military standard	17348
Sweeteners:		machine written, algorithm for recognition, USSR study	875
used by—		Symmetry pattern recognition system 2	18228
baking industry	13837	Symposiums:	
beverage industry	10049	AEC and contractors nuclear materials management	16859
confectionery industry, competitive position in U.S.	12043	AEC, packaging and regulatory standards for shipping radioactive material	7710
dairy industry	10048	necroelasticity, Göttingen, Apr. 16-17, 1957	19941
food processing industries	351	airborne collision prevention devices	9457
Sweetfern rust on hard pines	15551	Arctic biology and medicine	18489
Sweetpotatoes:		astronomy and physics of meteors, proceedings, Aug. 28-Sept. 1, 1961, papers	14693
acreage marketing guides	5780	ceramic coated reactor fuels	15008
acreage, yield, etc., by States and seasonal groups, 1961-62	20193	chemistry of cement, proceedings	5619
canning industry in South, feasibility of expanding	11458	computer applications to nuclear and radiochemistry	9681
instant, market test in selected institutional outlets	5827	cosmic space investigation, 3d International, USSR report	2570
Swift, L. B.:		crystalline solids	9207
Igoe basic course	5726	geophysics, Hungary	15685
Kituba, basic course	21118	ground water contamination	16525
Swimming, operation waterproof 4th grade	16515	juvenile delinquency, school's role in prevention	8181
Swimming pools:		military industry missile and space reliability, papers	8141
minimum property standards	20671	narcotic drug addiction, problems, history, proceeding	21033
public, suggested ordinance and regulations	18294	observatory generation of satellites, papers	10988
Swindel, G. W., Jr., layman's look at water in Alabama	10301	organ culture, studies of development, function, and disease	9225
Swindles, see Fraud.		organic and non-silicate silicon chemistry, Dresden, East Germany	14399
Swine:		protection against hazards in space, proceedings	9687
effects of loud sounds on physiology and behavior	5846	protein analysis, Quedlinburg, Germany	17634
feeder pig pooling, improved marketing, etc.	4357	radiation-induced polymerization and graft copolymerization, proceedings	136
garbage-feeding, national status on control	3939	radionuclides in estuarine and other aquatic environments	12990
hog-lot equipment	13166	relay devices and finite automata, USSR	12573
internal parasites	5818	technology and use of lignite, proceedings, Apr. 1961	12825
pig crop reports	3367, 7463, 11340, 16619, 21138	thorium fuel cycle, proceedings, Dec. 5-7, 1962	15007
price and supply of hogs, factors affecting	4377		
trichinosis, how it affects your hogs, etc.	16744		
Swine plague, control, Yugoslav rules	10685		
Swinomish Channel:			
modification of existing project, engineer report—			
departmental edition	462		
document edition	241		

# INDEX 1963

Entry	Entry
Symposiums—Continued	Tables (compilation), <i>see</i> Technical, scientific, and economic subjects.
uranium dioxide technology, characterization	Tables (furniture):
1838	picule tables use of red oak, and hickory for making, advantages, etc. 17500
Symptomatology, <i>see</i> Semiotics.	Tables (mathematics), <i>see</i> Mathematics.
Synchos:	Tables of aerodynamic coefficients from Newtonian expressions for conic and spheric bodies at combined angles of attack and sideslip 11089
fundamentals course—	Tables of carlot conversion factors, fruits and vegetables, supp. 1619
instructor's guide for maintenance training 7363	Tableware:
trainee's guide for maintenance training 7364	earthenware table articles, Tariff Commission report 9460
Syndrome, <i>see</i> Diagnosis.	household china, Tariff Commission report 9461
Synopsis of Government proposed procurement and sales contract awards 3524	stainless-steel flatware, Tariff Commission report 21140
Synthesis of $\omega$ -halohexadecanoic acids 18233	Tabulation of data on receiving tubes 12893
Synthetic atropine like substances, USSR 14159	TACAN, <i>see</i> Air navigation.
Synthetic detergents, <i>see</i> Cleaning compounds.	Tackle, David, specific gravity of lodgepole pine 571
Synthetic organic chemicals, <i>see</i> Organic compounds.	Tacks, thumbtack, Federal standard 19212
Synthetic rubber, <i>see</i> Styrene-butadiene rubber.	Tacoma, Wash., electric facilities of area, map 519, 2266
Synthetic woven goods, <i>see</i> Textiles.	Taconite, Mesabi Range nonmagnetic, metallurgical evaluation, etc. 1243
Syphilis:	Tactics, <i>see</i> Military art and science—
laboratory procedures for modern serology 3291	Naval art and science.
world forum 21095	Tactile sensitivity, exercisability, USSR study 12342
Syracuse, Kans., railroad accident 6637	Taeuber, Irene B., presentation on Asian populations, critical decades 296
Syracuse, N.Y., Hancock, Airport, weather observations, hourly, decennial census 11395	Taft, H. M., community effort in boll weevil control 4338
Syria:	Taft, Robert A. Sanitary Engineering Center, <i>see</i> Robert A. Taft Sanitary Engineering Center.
constitution 1107	Taft-Hartley act, <i>see</i> Industrial relations.
decree regarding teachers association 5387	Tail-wing fuselage combinations, <i>see</i> Airplanes.
political personalities, biographic information 2735	Tait, Howard D.:
United States foreign aid program, report of study 19055	estimating abundance of pink and chum salmon fry in Prince William Sound, 1957 2300
Systematics, <i>see</i> Biology.	fyke trapping as means of indexing salmon escapements in turbid streams 6466
Systems:	Taiwan, <i>see</i> Formosa.
and procedures, notebook for systems man 8373	Take command, apply for OCS 14938
development and management hearings 290, 13652	Take-off (aircraft):
<i>see also</i> names or types of systems, e.g. Alarm systems.	GETOL configuration, ground effect, feasibility and potential, research program 9465
Systems Maintenance Service, aircraft accident notification procedures, etc. 10102	GETOL research program final report 21141
Systems Research and Development Service, FAA, organization handbook 15470	off-runway, unprepared surfaces, C-130B, etc., capabilities 11484
Szabo, Daniel:	Taking care of diabetes 13028
basic data on economy of Viet-Nam 6593	Takushan, <i>see</i> Kushan, Manchuria, China.
market for U.S. products in Viet-Nam 2419	Talbot, Gerald B., American shad 551
preparing shipments to Viet-Nam 5066	Talc:
Szaloczi, Jean K., public social welfare personnel, 1960 14803	heat of formation 14516
Szechwan Province, China:	in U.S., bibliography 15607
economic geography 8438	magnesia, mining and milling methods and costs, Eastern Magnesia Talc Co. 3057
Snow Mountain and its grasslands 2514	minerals yearbook chapter 18109
Szmyd, Lucian:	ultramafic talc-bearing rocks and adjacent country rocks in north-central Vermont, petrology and geochemistry 603
crevicular depth of 2d molar in impacted 3d molar surgery 82	
SAM contourator, model B, instrument for measuring changes of surface contours 74	
subjective and objective measurement of responses to third molar impaction surgery 16792	
surface contour changes after tooth extraction 7640	
<b>T</b>	
T Series 5901	
T.V.A., <i>see</i> Tennessee Valley Authority.	



# JANUARY-DECEMBER

	Entry
Talent:	
and tomorrow's teachers, honors approach	8179
identification and development in secondary school students	19094
management, providing for small business	1458
test composites, comparison with Air Force aptitude indexes	18496
Talent fees, definition under fair labor standards act	3397
Talerico, Robert L., natural mortality of Zimmerman pine moth in 3 Michigan plantations	12172
Talking books for quadriplegics and near blind, hearing	18945
Tallahassee, Fla., Dale Mabry Field, weather observations, hourly, decennial census	21156
Tallow, edible, continued increase in output anticipated	8148
Tamarisk, removal reduces water-table fluctuations in central Arizona	4988
Tame, K. E., disposal of liquid waste in resin-in-pulp-type uranium milling flowsheet	3075
Tampa, Fla.:	
harbor improvements, engineer report—	
departmental edition	450
document edition	256
October test shipment of grapefruit to Hamburg, Germany	9533
wholesale fruit and vegetable markets, organization	7574
Tampico fiber, see Istle.	
Tanganyika:	
newly independent nation, fact sheet	11292
official publications, bibliography	9090
Tank vessels, see Tankers.	
Tankage, production, semiannual report	7461, 16616
Tankers:	
fuel truck, inadequate interior protective coating, unnecessary costs incurred by Army Dept., GAO report	20723
oil, corrosion inhibitors to protect inside surface of tanks, USSR study	6802
ore/oil carriers in world fleet, 1962	16313
Tanks:	
aircraft-fuel-tank design for liquid hydrogen	10973
escape training, breathholding ability relationship to performance in escape training tank	7189
Liquid combination undergoing free and forced planar oscillations, coupled dynamic response	16408
Liquid-filled, wall impacted by high-velocity particles result in catastrophic fracture	12848
Liquid vapor interface configuration, effect of contact angle and geometry during weightlessness	21004
mobile, for petroleum products, anti-corrosion protection, USSR study	6824
propellant material and rocket fuels or oxidizers, chemical reaction between them when impacted by small high-velocity projectiles	16393
spherical, slosh-damping of liquid oscillations	12860
toroidal, for spacecraft, frequencies and forces resulting from liquid sloshing	12858

	Entry
Tanks—Continued	
see also Septic tanks—Waste disposal tanks.	
Tanning and tanning materials: determining glutaraldehyde and chrome in tanning solutions— extracts, exemption from duty, continue—	7547
law	17022
reports	13548, 15347
leather tanning and finishing, industry wage survey	14478
see also Leather, hides, and skins.	
Tan-O-Quil-QM process for chemical modification of feathers	11252
Tantalum:	
alloys, recommended for rolling to foil	7627
determination in titanium alloys, recommended methods of panel of Metallurgical Advisory Committee on Titanium on methods of analysis	12904
materials survey	3054
minerals yearbook chapter	18069
producing by electrolytic method, USSR study	6811
semi-finished, production and properties, German study	5186
Tape:	
computing machine, paper, Federal standard	19211
gummed draft paper sealing, simplified practice recommendation	11600
video, neurological and sensory disease, film guide	16514
Tape recorders:	
drop-outs in magnetic systems	3220
precision endless-loop magnetic, for space applications, description	5579
satellite, application of modularization concept	1285
Tar, hydrocracking low temperature, from North Dakota lignite	10966
Tar roofing, see Roofing.	
Tar siding, see Siding.	
Target practice, national trophy matches, 1962	1798
Targets:	
acquisition, field artillery, field manual	100
small arms ranges, Air Force manual	9608
Tariff:	
act of 1930, amend—	
comments by interested individuals, etc.	15335
hearings	8103, 15383
law	17016
reports	4739, 4742, 4746, 4750, 13564-565
Austria, anti-dumping legislation	8416
average rates of duty, 1961	2399
classification study—	
proposed implementing legislation, comments on	15335
3d supplemental report	11343
4th supplemental report	11344
5th supplemental report	11345
6th supplemental report	13097
7th supplemental report	16626
customs, duties, code of Federal regulations	8246
customs hints for nonresidents entering United States	342
customs hints for returning residents of U.S.	10031
customs regulations—	
commercial importers, exporting to United States	12032
revised pages	340-341, 6307, 8131, 10030, 12033, 13830, 15405, 17339.

# INDEX 1963

	Entry		Entry
<b>Tariff—Continued</b>		Task variables, efficiency of open-	
customs valuation under revised		ended inventory in eliciting	
German law, 1962.....	5067	task statements from job in-	
decisions under customs laws.....	4245	cumbents.....	18493
Customs Court.....	8133, 15496	Tasmania, lights and fog signals, list,	
emergency laws of 1921, with		change.....	5652
amendments, compilation.....	211	Tatar Autonomous Soviet Socialist	
import duties—		Republic, sewing and footwear	
1962—		industry, conference in Kazan'	
annotated for statistical re-		on problems, USSR report.....	15881
porting, public bulletin.....	7766	Tate, Merle W., differences between	
supplements.....	1569, 7469	good and poor problem solvers.....	17366
1963—		Tax Court:	
annotated for statistical report-		appropriations, 1964, hearings.....	7985, 9997
ing.....	11641	reports (decisions)—	
schedules.....	14743	advance sheets.....	4225
import tariff system—		bound volumes.....	11348, 16629
Argentina.....	8386	consolidated pamphlets.....	4226
Australia.....	5082	Tax dates for small plants.....	5716
Belgium, Netherlands, and Lux-		Tax exemption:	
embourg.....	6604	District of Columbia, home repairs,	
Burma.....	5077	incentives, hearings.....	20497
Cambodia.....	6621	foundations and charitable trusts,	
Canada.....	5087	their impact on economy.....	2063, 18960
Congo (Leopoldville).....	8417	nonprofit corporations, mutual de-	
Egypt (U.A.R.).....	2390	posit guarantee funds, re-	
Entente States (Ivory Coast,		port.....	13580
Dahomey, Niger and Upper		Tax refunds:	
Volta).....	2393	internal revenue taxes, refunds	
Federation of Rhodesia and Ny-		and credits, reports.....	9837, 15184
asaland.....	5070	related to illegally imposed local	
Fiji Islands.....	6613	taxes included in prices of	
France.....	10342	Navy Dept. contracts, reten-	
Guatemala.....	5078	tion by General Dynamics/	
Honduras.....	2385	Pomona, Division of General	
Iceland.....	2428	Dynamics Corporation, Po-	
Ireland.....	6589	mona, Calif., GAO review.....	8321
Nicaragua.....	10339	Taxation:	
Peru.....	6600	careers in tax work.....	2370
Republic of Rwanda and Kingdom		cases decided by Supreme Court,	
of Burundi.....	6599	Oct. term 1961.....	9951
Small Republic.....	10335	double—	
Switzerland.....	12253	agreement with India.....	20522
nontariff barriers to movement of		convention with Japan—	
tobacco in free world coun-		protocol.....	20525
tries.....	12148	ratification, report.....	20535
publications, price list.....	5680	relief on earnings from operation	
reduction of exemption on articles		of ships and aircraft, agree-	
purchased abroad—		ment with Iceland.....	7453
law.....	13427	farm taxes—	
reports.....	11832, 13544, 13584, 13742	real estate, recent trends and de-	
schedules—		velopments.....	2137, 20627
annotated, 1963.....	16627	report.....	1901
supplement.....	18346	rural urban fringe, Fairfax	
revised, proposed implementing		County, Va., case study.....	10053
legislation, comments on.....	15335	Federal tax dates for small plants.....	5716
suspension by Federal Maritime		Federal unemployment tax receipts	
Board, extend time, hearings.....	297	and Federal allocations to	
U.S., effective Aug. 31, 1963.....	20200	States for employment security	
see also General agreement on tar-		administration, 1960-61 and	
iffs and trade—also names or		1961-62.....	3329
classes of articles imported or		guide for U.S. citizens abroad.....	2378
exported.		legislation as route to economic	
<b>Tariff Commission:</b>		growth (address).....	18631
appropriations, 1964—		limiting priority and nondischarge-	
hearings.....	11874	ability in bankruptcy, report.....	11833
report.....	11848	local taxing powers, State constitu-	
notices, of hearings, investigations,		tions.....	4328
etc.....	4224	maritime industry's gains from	
public information releases.....	4096	President's reform program	
report, 1962—		(remarks).....	11361
departmental edition.....	3375	People's Republic of China.....	6758
document edition.....	2033	President's 1963 tax message, see,	
rules of practice and procedure.....	3376	in main alphabet, Income tax.	
<b>Tariffs and trade, general agreement</b>		property—	
<b>on, see General agreement on</b>		assessed values.....	152
<b>tariffs and trade.</b>		role of States in strengthening.....	20257
<b>Tarr, Cedric W., jr., administration of</b>		publications, price list.....	5680
<b>national security.....</b>	4779	quarterly tax reports.....	16903, 20362
<b>Tarantius, LAC61, lunar chart.....</b>	7619		
<b>Tarzwel, B. M., biological problems</b>			
<b>in water pollution.....</b>	16521		

# JANUARY-DECEMBER

	Entry		Entry
Taxation—Continued		Taylor, R. J., wind profiles in atmospheric friction layer.....	18453
railroad employees, retirement tax act, amend—		Taylor grazing act, <i>see</i> Grazing.	
hearings.....	18950, 19065	Tazewell County, Va., coal, preparation characteristics.....	19868
law.....	18779	TB topics (series).....	13157
reports.....	17143, 19012	TB-25N airtanker flight evaluation.....	10249
reduction and revision as stimulus to investment and business development (address).....	19778	Tbilisi, GSFR, tourist information, USSR study.....	14152
science, technology, tax policy, and economic growth (remarks).....	7500	TC series.....	2283
small business, 1963, guide.....	2377	Tchernosvitoff, Marie, relief.....	11785
social security, household employers.....	626	Tchin, Anna-Marie K. T., <i>see</i> Tham, Anne M. K.	
State—		TCREC technical reports.....	3383-85, 5758, 7481-86, 9465-66, 11349-351
and local fiscal capacity, measures and tax effort.....	3332	Tea, foreign agriculture circulars.....	3720
and local governments, revenue.....	15079, 16903, 20362	Teachers:	
and local participation of Federal-aid funds, prohibit, hearings.....	15331	aerospace periodicals, science services, list.....	13864
on interstate commerce activities, investigation—		association in Syria, decree regarding.....	5387
expenses, reports.....	6120, 18877	business education, increases in courses and graduates, 1955-61.....	15435
extend time for filing reports—		deaf children, training.....	10082
law.....	13416	District of Columbia—	
reports.....	11807, 11987	educational leave, increase partial pay, report.....	18895
tax collection in 1963.....	16904	temporary, health and life insurance benefits, extend—	
tax policy—		hearing.....	11910
and U.S. economic prospects (remarks).....	11363	report.....	11841
make U.S. exports more competitive (remarks).....	12123	educational needs for school library administration, etc., conference proceedings.....	19117
tax program and balance of payments (remarks).....	7494, 20217	elementary—	
tax program in perspective (remarks).....	7501	Bureau of Indian Affairs, examination announcement.....	1943
tax program, stimulus to economic growth (remarks).....	5760	school personnel, summer institutes, 1963.....	3197
taxable property values, census of governments, 1962.....	15035	elementary and secondary schools—	
taxes and Internal Revenue Service, brief history.....	17552	fall 1962, statistics.....	10070
United States taxes during past 100 years, history.....	6580	institutes for advanced study, etc., hearings.....	13645
violations, criminal aspects under U.S. laws.....	15635	English teaching forum, facts and ideas for teaching English as a foreign language.....	14762
your State and local taxes, troop topics.....	11539	exceptional children, extend teacher training program, report.....	13579
<i>see also</i> Employment taxes—Excise taxes—Income tax—Inheritance and transfer tax—Internal revenue—Tax exemption—Tax refunds— <i>also</i> names of articles, etc., subject to tax.		exchange opportunities, teaching and summer seminars, 1964-65.....	17397
Taxes, <i>see</i> Taxation.		high school—	
Taxonomy:		foreign language, source materials, addendum.....	8157
categories, criteria, USSR study.....	5204	science and mathematics—	
Chaetomiales, cellulose-destroying fungi, monograph.....	7683	characteristics and service loads.....	9252
Taylor, Arthur R., jr.:		survey, 1961.....	8177
thermodynamic properties of—		international development program, 1960-61, report.....	2157
beryllium sulfate from 0° to 900°K.....	10967	physics, space science program, papers.....	10900
cesium chloride and cesium iodide from 0° to 300°K.....	5484	placement, centralized services, directory.....	19127
Taylor, Cora E., occupational outlook for 1970.....	9080	preparation, 5-year programs.....	13868
Taylor, Dee F., mortarboard psychrometer.....	19270	salaries, merit programs.....	2164
Taylor, Earl G.:		science and mathematics—	
wholesale florist facilities for Boston, Mass.....	35	in-service institutes, 1963-64.....	11129
wholesale food-distribution facilities for New Bedford, Mass.....	14868	institutes, academic year 1963-64.....	1359
Taylor, Marlowe M., farm enterprise input-output data, publications, list.....	10059	public high schools, basic information.....	17393
Taylor, Paul B., charts of corrections to airborne radar observations for refraction, etc.....	7596	summer institutes, secondary school, 1963.....	3198
		science, mathematics, and engineering.....	1363
		secondary school foreign language, source materials.....	2169
		Soviet, awards.....	15740
		student loans, amend national defense education act to permit partial cancellation, report.....	20585

# INDEX 1963

	Entry		Entry
Teachers--Continued		Technical documentary reports:	
talent and tomorrow's teachers,		Aeronautical Systems Division...	47,
honors approach.....	8179	5848-52, 7587-96, 9595-98,	
trade and industrial education,		11470-476, 13195-196, 14899,	
teacher trainers, directory....	2153	16767, 18448-449, 20295-300.	
turnover in public elementary and		Aerospace Medical Research Lab-	
secondary schools, 1959-60,		oratories.....	7604, 11477, 20301
report.....	15450	Air Force Flight Test Center.....	1741,
<i>see also</i> Faculty (schools).		5856-63, 7608-10, 9607, 11482-	
Teaching:		485, 13200-201, 14902-905,	
aids, medicine, lantern and micro-		16773, 18457, 20304.	
scopic slide sets, catalog.....	18549	Air Force Special Weapons Center...	11487
career opportunities.....	13869	Arctic Aeromedical Laboratory....	1751-66,
elementary boarding-school grades,		11488-503, 13203-206, 14907-	
joint work of teacher and class		912, 18467-483.	
advisor, USSR study.....	2714	Electronic Systems Division....	58, 1769-
human rights, suggestions.....	10081	70, 4396, 9614-15, 11507, 14914,	
materials, periodicals related to in-		18486-487.	
ternational understanding, an-		Personnel Research Laboratory....	63-67,
notated list.....	374, 10069	1772-73, 4401-7, 5882-83, 7622-	
physics in USSR, report for		26, 9622-26, 11512, 13213,	
UNESCO.....	12656	16783-787, 18493-496.	
positions outside continental United		Rome Air Development Center....	11513,
States, sources of information,		18497-498	
list.....	13853	School of Aerospace Medicine.....	69-83,
programmed instruction, bibliog-		1775, 4410-23, 5888-92, 7629-	
raphy.....	18486	40, 9628-34, 11514, 13214-218,	
self-instructional programs, eval-		14917-922, 16790-808, 18500-	
uating.....	10064	507, 20310-313.	
sources of information on educa-		Technical education:	
tional media.....	15447	Air Force training, prediction of	
suggestions for starting process		success from educational	
teaching in science.....	15446	achievement information.....	16784
<i>see also</i> Programmed instruction--		Communist China, specialization in	
also subjects taught.		higher technological educa-	
Teaching machines:		tion.....	8185
applications--		technical education program se-	
education, USSR study.....	12596	ries.....	2163, 6332
studies.....	3219	technical training in U.S.....	13844
bibliography.....	4440	trade and industrial education--	
computers for programmed educa-		State supervisors, directory....	2152
tion, USSR study.....	12654	teacher trainers, directory.....	2153
cybernetic approach to educational		Technical guide, Urban Renewal Ad-	
theory, USSR study.....	6965	ministration.....	1579, 11370, 18358
equalization, for selection and		Technical information bulletin:	
training of operators of higher		Atomic Energy Commission.....	4498
order vehicle systems.....	11183	atomic weapon accident hazards,	
evaluating.....	10064	precautions and procedures....	7720
mathematics.....	2172	Technical information handbooks, Air	
programmed instruction, bibliog-		Force Flight Test Center 12036,	16774
raphy.....	18486, 20644	Technical information memorandums,	
survey of auto-instructional de-		Air Force Flight Test Center...	7610
vices.....	5872	Technical journals, Soviet bloc and	
Teamsters, Chauffeurs, Warehouse-		China, selected articles, Eng-	
men and Helpers of America,		lish abstracts.....	3621-27
International Brotherhood of,		Technical Laboratory, BPA, safety	
<i>see</i> International Brotherhood		manual.....	13255
of Teamsters, Chauffeurs,		Technical leaflets, area redevelo-	
Warehousemen and Helpers of		ment.....	12243-244
America.		Technical Liaison Office, Army Engi-	
Teamwork, TVA and Tennessee		neer Research and Develop-	
Valley Trades and Labor		ment Laboratories, press re-	
Council.....	4227	leases.....	4097
Technical aids for small manufac-		Technical manuals:	
turers.....	7429	Army Department.....	112-113, 1807-10,
Technical assistance, <i>see</i> Foreign aid.		4458-59, 7681, 9662-63, 11542-	
Technical assistance aid (series)....	12777	544, 13241-244, 14947, 16828-	
Technical assistance in area rede-		829, 18556-557, 20327-328.	
velopment.....	11524	Defense Dept. military/industry	
Technical bulletins:		specification standardization	
Agriculture Department.....	46, 1729-30,	program.....	8139
4377, 5846, 7583-84, 9591-92,		Navy calibration program.....	3239,
11467, 13189-192, 16765-766,		9290-9300, 14636, 18256-262,	
18445-447, 20294.		20002-9, 21060-61.	
Apprenticeship and Training Bu-		Technical memorandums:	
reau, T series.....	5901	Beach Erosion Board.....	6358-60,
Coast and Geodetic Survey.....	1956	19130-132	
Committee on Tidal Hydraulics....	13877	Human Engineering Laboratories....	9314
Technical cooperation, <i>see</i> Foreign		National Aeronautics and Space	
aid-- <i>also</i> name of country with		Administration.....	128, 3115-16,
which agreement is made.		5554-66, 7237-41, 10990-11015,	
Technical cybernetics, USSR.....	14099	12846, 14514-545, 16362, 18132-	
		134.	
		Waterways Experiment Station....	13884-
			885

# JANUARY-DECEMBER

	Entry
Technical news bulletin, National Bureau of Standards.....	4228
Technical notes:	
Aeronautical Systems Division.....	9599
abstracts, Apr.-Dec. 1961.....	5883
Aretic Aeromedical Laboratory.....	11504-
506, 13207, 14913, 18484.	
Ballistic Research Laboratories.....	9311
Lake States Forest Experiment Station.....	577-579
National Aeronautics and Space Administration.....	1269-1318.
3117-63, 5567-5610, 7242-93.	
9144-91, 11016-81, 12847-887.	
14546-591, 16363-411, 18135-167, 19906-940, 20977-21008.	
National Bureau of Standards.....	1331-34
3176-77, 5620, 7312-13, 9209-17, 11098-102, 12900-903.	
14599-604, 16421, 18191-195	
19952-953, 21028-30.	
Northern Forest Experiment Station.....	12159
Wright Air Development Center, abstracts, 1958-59.....	5883
Wright Air Development Division, abstracts, 1960-61.....	5883
Technical papers:	
Census Bureau.....	7768, 11636, 13304, 16906
Central States Forest Experiment Station.....	567, 4979, 6482, 8291
metallographic group meeting.....	4486
Pacific Southwest Forest and Range Experiment Station.....	2314-15.
6500-3, 8299, 12164, 15558.	
Weather Bureau.....	1593
5771, 13131, 14802, 16692	
Technical records of design and construction:	
Anchor Dam.....	7419
Prineville Dam.....	13036
Technical reports:	
AD-PB correlation index.....	4507
Aeronautical Chart and Information Center.....	1731
Aeronautical Systems Division.....	56
1767-68, 4391-94, 5870-74	
7597-7602, 9600-1, 16768.	
abstracts Apr.-Dec. 1961.....	5883
Air Force Flight Test Center.....	1741
Air Materiel Command.....	18467
Army Map Service.....	20649
Army Transportation Research Command.....	3383-85, 5758
7481-86, 9465-67, 11349-351.	
13098-100, 14749-753, 16631-632, 18348-354, 20203-208	
21141-143.	
Civil Defense Office.....	9740, 20376
Cold Regions Research and Engineering Laboratory.....	4843-44
12086-87, 19135-137	
Diamond Ordnance Fuze Laboratories.....	11197, 14637, 16472
Earth Sciences Division.....	1435-38
Federal Aviation Agency, consolidated abstracts, 1957-62.....	
general distribution.....	14738
Government distribution.....	13073
Feltman Research Laboratories.....	7378
Information Retrieval Section, FAA Library Branch, list.....	10104
National Aeronautics and Space Administration.....	1321-25.
5612-15, 7391-2, 9198-99, 11088-91, 12889, 18168, 19943-946.	
Naval Civil Engineering Laboratory.....	13135
Naval Ordnance Laboratory, White Oak, Md.....	1373, 12948

	Entry
Technical reports—Continued	
Naval Training Device Center.....	1371,
3217-19, 5657-58, 7366, 9272,	
12946-947, 18226-227, 19998-20000.	
new products and processes.....	14933
news letter.....	4231
Ohio River Division Laboratories.....	13880
quality control and reliability.....	8142
Robert A. Taft Sanitary Engineering Center.....	9350-51,
11245, 14670, 16519-532	
Veterans Administration.....	11372
Watertown Arsenal Laboratories.....	9316,
11198-199, 12965-966, 18265.	
Waterways Experiment Station.....	466,
2227-31, 4874-75, 6378, 10091-93,	
13886-890, 15457-460,	
17413-414, 19152, 20653.	
Wright Air Development Center.....	9636
abstracts, 1958-59.....	5883
Wright Air Development Division.....	86-87,
1779-80, 4424, 5893, 7646-49,	
9637-39, 11515-518.	
abstracts, 1960-61.....	5883
Technical reprint NASA RP series.....	21013-25
Technical research notes:	
Army Personnel Research Office.....	4461-63,
7684, 11546, 14948-949, 16830-831, 18559.	
abstracts, 1962.....	4461
Technical research reports:	
Army Personnel Research Office.....	4467-67
abstracts, 1962.....	4461
Technical Sciences Department, Academy of Sciences, USSR, technical cybernetics, news.....	19402
Technical services, information systems in current use, report.....	3316
Technical Services Office:	
correlation index of technical reports.....	4507
non-ferrous metals, research reports and translations available.....	13265, 15028
OTS selective bibliography SB series.....	148-149, 1864-72,
4553-51, 7738-41, 9707, 11598,	
13266, 15029-30, 18626-629.	
list.....	148, 1864, 18625
releases.....	4079
Technical standard orders.....	8221, 13903
Technical translations:	
bibliography, OTS periodical.....	4232
periodicals translated in, basic list.....	5957, 15025
National Aeronautics and Space Administration.....	1319-20,
3161-68, 7294-99, 9192-97,	
11082-85, 14592, 18169-181,	
19941-942, 21009-12.	
Technicians:	
Army-Air Force Wage Board localities and codes.....	19956
Army National Guard—organization, manning criteria.....	9219, 19957
program, administrative procedures, pamphlet.....	19955
programs, job description, pamphlet.....	5621
civil and highway, determining courses of study.....	6346
civilian career opportunities, Air Force Dept.....	1748
civilian job opportunities, Army Dept.....	11531
coded occupational titles in trade and industrial education, list.....	10063
communications 0 3 & 2.....	3216
employment in Federal Government, 1959-60.....	1362
first national assembly of Chilean Communist Party, report.....	757



# INDEX 1963

Entry	
Technicians—Continued	
human resources, training of scientific and technical personnel—	2443
laboratory and clinical in health research, NIH, examination announcement	13330
Soviet, awards	15740
Yugoslav association, honorary, etc., members	944
see also Dental technicians—Medical technicians—Missile technicians.	
Technological unemployment: experience of other countries in dealing with problem	19124
relationship to agricultural productivity (address)	3011
Technologists, see Medical technologists.	
Technology:	
agriculture's most versatile resource (talk)	1662
American education, 1650-1900—	6348
aspects of cybernetics, Rumanian study	20897
bibliography, 1957-61	9092
Bulgaria, regulation on state committee for science and technical progress	16058
ceramics and refractories	18520
civilian, Atomic Energy Commission, methods for promoting growth (remarks)	18608
Communist China, translations—	648,
912, 2503, 2580, 2963, 2993,	
5169, 6767, 6920, 7075, 8497,	
8917, 8947, 10437, 10442, 10446,	
10502, 10516, 10528, 10592,	
10614, 10646, 10738, 12348,	
12392, 12613, 14309, 14408,	
14424, 15800, 15928, 15973,	
15996, 16068, 16203, 17711,	
19392, 19452, 19468, 19479,	
19557, 19665, 19737, 20770,	
20879.	
computer, in national economy, USSR study	19439
crystallography and technology, USSR study	7067
development, relationship to labor productivity, USSR study	8837
East European journals, abstracts—	734,
778, 858, 901, 922, 940, 964,	
1027, 1048, 1069-70, 1092, 1111,	
2494-95, 2542-43, 2597-98, 2613,	
2645-47, 2675, 2726-30, 2755,	
2757, 2777, 2812-13, 2874-78,	
2928-29, 2947-50, 5121, 5173-75,	
5206-8, 5243, 5275-78, 5308-10,	
5350, 5381-84, 5420-21, 6637B,	
6639, 6672, 6674, 6699, 6710-11,	
6714-15, 6717, 6796-98, 6820,	
6849, 6879-81, 6911-12, 6949,	
6981, 7014, 7087-89, 8475-77,	
8479, 8522-24, 8586, 8608-9,	
8615, 8685-88, 8774-79, 8846,	
8882-86, 8962, 8976, 10394,	
10396, 10419, 10428-430, 10453-455,	
10466-467, 10534-537,	
10546-547, 10606-610, 10673,	
10677, 10712-715, 10720, 10722,	
10764, 10793-799, 10866-868,	
12298, 12300-305, 12418-419,	
12438-439, 12448, 12525-528,	
12555, 12558-12560, 12579,	
12664-671, 12684-687, 12732,	
12740, 12742-744, 12746-747,	
14086, 14094, 14108-110, 14225-227,	
14258, 14290-291, 14325-329,	
14333-334, 14370-371,	
14375, 14412, 14417-418, 15696-698,	
15714-715, 15744-745,	
15874, 15877-878, 15884, 15893,	
15923-924, 15983, 15994, 16007,	
16014, 16138-142, 16162, 16166,	

Entry	
Technology—Continued	
East European journals, abstracts—	
Continued	
16201, 16204-205, 16207, 16218-220,	
17590, 17598, 17617-618,	
17621, 17639, 17692, 17716-718,	
17780, 17791-792, 17824-825,	
17837, 17855-857, 17876, 17897,	
17914-915, 17942, 17954, 17986,	
17988-990, 19394-395, 19428-429,	
19483, 19501, 19513, 19521-522,	
19527, 19540-541, 19585,	
19604, 19612-613, 19623, 19646-648,	
19704-706, 19722-723,	
19725, 19747, 19760, 19771,	
20763, 20794, 20837, 20839-841,	
20874, 20886-889.	
East European literature, guide	5646
East Germany, nuclear research and technology	7118
economic and social implications, current projects, 1952	9250
economic growth through effective use of technical resources (address)	15138
effect of changes on women telephone workers	20254
employment of aliens, report	13753
France, scientific and technical research, 4th plan	19484
future international meetings, world list	4314
handbook	7645
impact of change in pulp and paper industry—	
departmental edition	1177
document edition	282
Impact upon manpower (remarks)	10911
industrial growth, program for development (address)	4649
industrial, national considerations on development (address)	4651
Israel—	
information	748, 1150
personalities, biographic information	20899
translations	2776
management challenge of the sixties (address)	4399
manpower—	
meeting needs	3260
profiles	16446
supply, demand, and utilization, staff study	6208
mechanical, design and production, suggested 2 year post high school curriculum	2163
mining review, minerals yearbook chapter	3105, 14526
NBS national standard reference data program, background information	14604
new technologies and their promise for life sciences	5678
North Vietnam, translations	6813
nuclear science and technology, Yugoslav study	15905
older workers, performance in industrial retraining programs for technological change	14475
opportunities for and obstacles to technological innovation in housing field, report to Panel on Civilian Technology	13040
Panel on Science and Technology—	
4th meeting, report	2060
5th meeting—	
proceedings	6206
report	8010
physiology of labor and technical progress, USSR study	16230
progress during building of communism, USSR study	12597
psychology of man and technical progress, USSR study	5242

# JANUARY-DECEMBER

	Entry		Entry
Technology—Continued		Teichman, Louis A., calculation of	
readings on application to problems		electron energy deposition in	
of less-developed nations.....	5097	thin-film polymeric materials..	19938
relationship to economic growth		Tekhnika-molodezhi (periodical):	
(remarks) .....	4647	translations .....	8594
resources for economic growth		Tektites:	
(address) .....	18758	lunar origin .....	5584
role and effect in Nation's economy,		origin, discussion of theories.....	21025
hearings .....	17335	origin, unsolved .....	3166
science and technology, SE-(se-		scientific problems, adaptation of	
ries) .....	4171	punched-card systems for use	
science, technology, tax policy, and		in research .....	3167
economic growth (remarks).....	7500	Telecasting, ledgership or leadership	
scientific and technological policy,		(address) .....	2256
planning, and organization,		Telecommunication:	
papers prepared for United		abstracts pertaining to Communist	
Nations conference .....	2441	China in Soviet journal.....	14377
significance of cybernetics in Ger-		agreements with—	
man Democratic Republic.....	7085, 10506	Canada .....	5729
technical information—		Dominican Republic, radio ama-	
interchange, agreement with		teurs, exchange of third party	
Sweden .....	1547	messages .....	16584
machine translation and infor-		Guinea .....	16587
mation processing develop-		Israel, facilities at embassy sites,	
ments .....	14148	etc .....	16589
technical research—		Philippines, radio broadcasting	
problems of efficiency, Rumanian		facilities .....	14731
study .....	19614	code of Federal regulations..	6433, 12117
USSR achievements under com-		Communist China, rapid develop-	
munist, public inspection of		ment .....	2975
plan fulfillment .....	5281	international convention, annexes	
technological communication in		and final protocol .....	20524
Government, organization and		see also special method of commu-	
coordination of information..	18275	nication.	
technology for youth (USSR peri-		Telegraph:	
odical) .....	8594	carriers, domestic and interna-	
use of radar technology in mete-		tional, reporting annually, sta-	
orology, East Germany .....	969	tistics .....	15483
USSR—		communications industry, outlook	
finance .....	6770	for 1963 and review of 1962..	7733
light industry, developments....	19456	data from carriers' monthly re-	
scientific and technical terms,		ports .....	3990
selective list .....	12816	domestic record communications	
scientific-technical progress and		industry, outlook for 1963 and	
regeneration of technical engi-		review of 1962 .....	5976
neering cadres .....	10408	House Members, additional allow-	
scientific-technical societies, role,		ances, report .....	18876
serial publications, list, 1945-60,		regulations, revision, 1958, and	
vocational education act of 1963,		final protocol—	
report .....	15270	report .....	20534
work force adjustments to change,		text .....	20512
employer procedures .....	6353	voice-frequency telegraphy systems,	
see also subjects.		USSR study .....	12681
Technology Branch, Fish and Wildlife		Telemechanics, translations from Av-	
Service, publications, bibliog-		tomatika i telemekhanika .....	6840
raphy .....	15523	Telemetering signals, attenuation and	
Teenagers, see Youth.		reflection by ionized flow fields	
Teeth:		surrounding reentry bodies .....	16378
Antarctic stress on dental struc-		Telemetry:	
tures .....	7192	devices for dental research.....	16798
cleaning in space cabin, selecting		digital readout technic for aero-	
method .....	5890	space medical monitoring of	
dentin, quantitative determination		physiologic data .....	7635
of lipids .....	7629	large environmental system, prob-	
denture bases, recording deforma-		lems .....	20001
tion in double processing .....	78	narrow-band, of nonrecurrent	
dentures, checking registration in		pulses .....	11179
centric relationship position..	77	problems, USSR all-Union confer-	
health of supporting tissues in		ence on use of radioelectronics	
complete denture construc-		in biology and medicine.....	6755
tion .....	11145	reactors, in-core instrumentation..	4478
horizontal tooth mobility, instru-		satellite signals, automatic data	
ment for measuring .....	18504	processing .....	21017
toothbrushing, supervised program		telemetering transmittals for in-	
effect .....	7190	core power monitoring, in-core	
see also Dentistry.		instrumentation development	
Tooth extraction, see Exodontia.		program, quarterly progress	
Teflon, see Polytetrafluoroethylene.		report .....	18573
Tehuantepec, Gulf of, physical, chem-		Telephone:	
ical, and biological observa-		carriers, statistics, 1962.....	15482
tions, report of 3 cruises in		communications industry, outlook	
region, 1958-59 .....	2299	for 1963 and review of 1962..	7733
		companies, uniform system of ac-	
		counts, FCC rules and regula-	
		tions .....	15481

# INDEX 1963

	Entry		Entry
<b>Telephone—Continued</b>		<b>Television—Continued</b>	
current industrial reports.....	3575	educational—continued	
data from carriers' monthly re-		facilities construction, Federal	
ports.....	3991	grants, rules and regulations..	14038
directories—		facilities program, instructional	
House of Representatives, Mar.		manual.....	13850
1963.....	7830	FCC progress report, hearings..	10004
National Aeronautics and Space		national policy, recommenda-	
Administration, June 1963.....	16353	tions by Educational Media	
Senate.....	310, 8017, 18963	Study Panel.....	8178
Ulan Bator City, Mongolia, brief		transmission apparatus, perform-	
instructions for using.....	14211	ance standards.....	13851
domestic communications operating		emergency broadcast system, in-	
industry, outlook for 1963 and		terim plan.....	15478
review of 1962.....	4540	employees, exemption from over-	
engineering and construction man-		time pay under FLSA.....	3396
ual.....	3315, 16554	equal time for nominees for Pres-	
House Members, additional allow-		ident and Vice President, sus-	
ances, report.....	18876	pend for 1964—	
rates, FCC progress report, hear-		hearings.....	9940, 17307
ings.....	10004	reports.....	11820, 11843
rural construction contract, labor		evaluation of recent developments	
and materials, addendum.....	7420	(address).....	10114
Rural Electrification Administra-		food demonstration tips.....	5837
tion borrowers systems, list of		four new dimensions (paper).....	4888
materials acceptable.....	3870, 11258	Government programs, key person-	
rural telephone borrowers, statisti-		nel, directory.....	2158
cal report, 1961.....	5711	local live programming in prime	
speech-intelligibility and talker-		time (address).....	13905
recognition tests of Air Force		microscopic demonstration for	
systems.....	9615	studying microorganisms,	
statistical bulletin.....	3926	USSR translation.....	16253
transmissions, methods of increas-		microscopy in industry and medi-	
ing capacity, Rumanian study,		cine.....	8658
voice-frequency loading for trunk		multiple insertion techniques.....	3217
cables.....	3315	network program procurement, re-	
women telephone workers and		port.....	9894
changing technology.....	20254	photography of moon, USSR study,	
see also Wire tapping.		program improvement, dependent	
Telephone cables, voice-frequency		on expressed public interest	
loading for trunk cables.....	3315	(address).....	12097
Telephone engineering, area coverage		ratings, methodology, accuracy, and	
design of telephone system.....	16554	use, hearings.....	17173, 18948
Telephone operators, women, effect of		regulation, laws, codes or competi-	
changing technology.....	20254	tion (address).....	13904
Telescopes, scintillation counter,		reproduction characteristics com-	
charge and mass identification		pared with photography, USSR	
of primary cosmic rays.....	16377	study.....	2737
Teletherapy, AEC licensing guide,		unscrewing of images for optimum	
possession and use of radio-		visual information, French	
isotope sources.....	14952	study.....	1063
<b>Teletype:</b>		USDA films.....	14881
market news service, Agricultural		utilization under national defense	
Marketing Service direct hook-		education act, news and re-	
up.....	13150	ports.....	15452
overpricing teletypewriters pro-		violence and crime programs, ef-	
cured under Army Dept. negoti-		fect on young people, hear-	
ated contract with Smith-		ings.....	8122
Corona Marchant, Inc., GAO		print additional copies, reports..	13633, 13767
report.....	14000		
<b>Television:</b>		Television cameras, see Cameras.	
advertising opportunities for small		Television channels, all-channel sets,	
business, report.....	2045	FCC progress report, hear-	
amateur receiver, construction man-		ings.....	10004
ual, USSR monograph.....	12499	Telling school lunch story.....	14831
broadcast actions, reports.....	3646	Telluride, Colo., area south, geology	
broadcasting, public responsibility		and mineral deposits.....	6546
and journalistic function (ad-		Tellurium, determination.....	7225
dress).....	17428	Telstar, see Satellites.	
broadcasting stations of world, in-		Temkin, Aaron:	
dexed by—		electron-hydrogen phase shifts just	
country and city.....	15546	below inelastic threshold....	12861, 18138
country, city, and frequency.....	15548	nonadiabatic theory of electron-	
cloud photography, meteorological		hydrogen scattering, pt. 2....	14550
satellite data obtained, cat-		positron-hydrogen scattering,	
alog—		theory.....	16386
TIROS II.....	14800	<b>Temperature:</b>	
TIROS IV.....	11407	air, diurnal amplitudes in USSR,	
current industrial reports.....	16890, 20351	atlas.....	2510
educational—		air, snow, and soil, relationships to	
by State and city.....	10068	soil frost formation.....	10234
facilities act of 1962, explana-			
tion.....	12062, 13489		

# JANUARY-DECEMBER

	Entry
Temperature—Continued	
ambient, influence on relation between skin temperature and blood flow in rabbit ear	14907
body, responses to cold of Peruvian Indians native to high altitude	18478
brightness, Venus at 1.35 cm	18252
cold ambient, effect on adrenal weight of mice	18475
Columbia River basin, monthly cross sections of temperature, pressure, and density near 80th meridian west, analysis	3918
daily normals of temperature and heating degree days, decennial census of U.S. climate	11036
effects of temperature and humidity on cheese mites	14780
electron and ion in ionosphere	9581
environmental—	18122
alteration, effect on absorption of calcium, iron and vitamin B <sub>12</sub>	18484
energy expenditure, report	116
extreme, tests of YHU-1D helicopter in Climatic Laboratory, category 2 evaluation	11476
fields in ground surface layer, USSR study	19445
gas, in arc-heated jets and tunnels, spectrometric measurements	20987
geothermal gradient measurement in drill holes less than 60 feet deep, East Tintic district, Utah	15606
ground, observations—	
Aniak, Alaska	12087
Fort Yukon, Alaska	4844
heating degree day manuals, decennial census of U.S. climate	14779
high—	
action on neutron irradiated animals, USSR study	16013
applications, intermetallic compounds development	9670
biochemical changes, USSR study	15932
effect on functions of digestive organs, USSR study	20771
effect on Schumann-Runge ultraviolet absorption continuum of oxygen	1321
frictional characteristics of alloys and coatings	4496
glasses, properties at elevated temperatures	9636
heat-physical properties of materials, USSR study	8856
intermetallic compounds, investigation	11518
metals testing, USSR study	10509
stress corrosion of alloys	7601
stress rupture tests on sintered wrought tungsten sheet	5569
stress-strain properties of brittle materials	9691
subsonic arc tunnel for structures and materials tests	11024
tantalum-modified, nickel-base alloy investigation	9150
vaporization of compounds and alloys	9638
variations in mechanical properties of copper-nickel alloys	6810
low—	
ambient, effect on resistance of mice to bacterial disease	1755
heat capacities of magnesium metavanadate and magnesium pyrovanadate	3088
properties of materials, solids	11515
static electricity accumulation on arctic clothing	14912

	Entry
Temperature—Continued	
lunar thermal emission measurements	50
mean annual maximum, national atlas sheet	3402
measurements—	
bibliography	18190
circuit for simultaneous recording of millivolt outputs	6517, 17505
thermocouple materials, selection and properties, errata	16419
mesoclimatic differences in Fort Greely, Alaska, area	1436
monthly normals, decennial census of U.S. climate	21155-175
nonuniform distribution cause of buckling of ring-stiffened cylinder	1305
plastics weight loss rates in vacuum from 80° to 500° F	1273
regulation, comparative physiology, papers	13209
regulation in nursing homes	13012
room, shear and compression tests of stiffened panels with integral or attached cooling circuits	9148
skin and structural, on X-15 airplane during flight	18133
skin resistance and galvanic skin response	20313
transit—	
ripening of early-season Bartlett pears shipped	13145
transcontinental cut-flower shipments	5833
ultra-low, insects resistance, USSR study	8577
Wallops Island, Va., above 50 km, measurement	7287
water studies for 1958, Middle Snake River drainage	8284
see also Body temperature—Cold—Heat—Heat transfer—Ocean temperature.	
Temple, Pa., railroad accident	14080
Tennille Range, geology of northern part	19300
Tennessee:	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4569
civil rights, public schools, 1962	1935
climatological data	3517
county business patterns, activities covered by OASDI program	15053, 18674
eastern, insects not cause of post-emergence chronic tipburn of white pine	12182
electric rate book	6408
5B redevelopment area, statistical profiles	13372-373
meatpackers, problems	1482
mineral industry, minerals year-book chapter	3066
Negroes, business enterprises	1464
pleasure boating industry	1447
population, 1960, characteristics	18664
precipitation data, hourly	3771
weather stations, decadal census	16685
women workers, 1960	11418
ZIP code directory	20067
Tennessee River and Valley:	
Norris watershed, multiple use	14745
precipitation in basin	4031
southwestern, 12-county area, forest inventory statistics	3379
water resource, nature's constant gift	14746
Tennessee Valley Authority:	
agricultural and chemical development, annual report 1962	7470

# INDEX 1963

Entry	Entry
Tennessee Valley Authority—Con.	Terrebonne Bayou:
annual report, 1962.....	flood control survey, etc., engineer
appropriations, 1964, hearings.....	report.....
audit report 1962.....	departmental edition.....
budget, 1964, decrease.....	document edition.....
career opportunities.....	2178
engineering.....	2006
engineers.....	Terrestrial magnetism:
economic advancement of American	anomalous component of low-energy
people (remarks).....	geomagnetically trapped pro-
electricity sales statistics, retail	tions.....
distribution.....	7285
fertilizer activities, 1962.....	Coast and Geodetic Survey as central
financial statements, 1962, audit,	depository of data, hear-
GAO review.....	ings.....
forestry bulletins.....	4756
forestry investigation notes.....	earth's magnetic field on—
industrial development in area,	Antarctic peninsula traverse, re-
1962.....	sults of measurements, 1961–
power, municipal and cooperative	62.....
distributors, report, 1962.....	16958
report, 1962.....	Ellsworth Highland and McMur-
retirement, selected list of refer-	do-to-Pole traverses, results of
ences.....	measurements, 1960–61.....
teamwork (periodical).....	1951
TVA's 30th anniversary, press com-	magnetic field of radiation belts.....
ments.....	12873
14747	magnetism of the earth.....
Tenney, Ralph F., Losch anthracite	1953
stoker performance in building-	paleomagnetic type in coupled disk
heating service.....	dynamos, field reversals.....
5477	11189
Tensile strength, <i>see</i> Strains and	solar radio bursts of spectral types
stresses.	2 and 4, relation to geomag-
Tension:	netic activity.....
behavioral energetics, individual	9386
differences in energy discharge	torques produced by magnetic field
resulting from induced frustra-	on rotating cylinders, etc.....
tion.....	5613
7196	United States magnetic tables for
dental patients—	1960.....
effect of local anesthetic proce-	1954, 7797
dures.....	USSR—
13218	activities in geomagnetism and
effect of time of day on adreno-	aeronomy, 1960–62.....
cortical response to oral sur-	19579
gery.....	research.....
75	19375
military small group performance	study.....
under isolation and stress,	20785
critical review.....	<i>see also</i> Magnetograms.
1762–66	Terriere, Robert T., petrography and
4413	environmental analysis of
stress studies in rats fed glycine	some Pennsylvanian lime-
containing diets.....	stones from central Texas.....
1758	19309
<i>see also</i> Strains and stresses.	Territories:
Tent caterpillars, Great Basin, de-	health authorities, directory 1963.....
foliation effects on greenleaf	14659
manzanita and mountain	health officers, conference, 1962,
white thorn ceanothus.....	with Surgeon General, PHS,
12162	and chief, Children's Bureau,
Tenure of land, <i>see</i> Land tenure.	proceedings.....
Tepper, Morris, meteorological satel-	18290
lites.....	territorial responsibilities of In-
18118	terior Dept.....
Terapevticheskiy arkhiv (periodical):	16630
articles.....	Territories Office:
5135	records, preliminary inventory.....
translations.....	12892
935	territorial responsibilities.....
Tereulak, W. B., flight shock and vi-	16630
bration data of Echo A-12, etc.....	Terry, Luther L., address, Aug. 13,
19923	1963.....
Tereshkova, Valentina, new cosmic	18291
tandem, USSR study.....	Tertiary deposits, west-central Ore-
20905	gon, mineral resources study.....
Term contracts.....	5015
2283	Tertiary echinoids from Caloosahat-
Terminal velocities of small fruits.....	chee and Tamiami formations
20264	of Florida.....
Terminals (transportation):	16560
marine, reason for regulations (re-	Tertiary larger Foraminifera from
marks).....	Guam.....
12112	10289
Termites:	Tesseral harmonics of gravitational
repellents, field evaluation.....	field and geodetic datum shifts
11188	derived from camera observa-
subterranean, prevention and con-	tions of satellites.....
trol in buildings.....	12885
16739	Test and evaluation of 2200 Mc.
Terraces, farming terraced land.....	parametric amplifier.....
5822	13201
Terrain:	Test ban treaty, <i>see</i> Nuclear explo-
diverse, floods in humid region,	sions.
factors influencing occurrence,	Test Pilot School, USAF Experi-
geographic study, use of aerial	mental, <i>see</i> USAF Experi-
photography, USSR study.....	mental Flight Test Pilot School.
12514	Test your understanding of direc-
microgeometry, mapping technique,	tors' responsibilities.....
2230	2239
musker, review of research.....	Testes:
1438	irradiation injury in mature mice
Thailand, factors affecting ground	following embryonic exposure,
mobility.....	USSR study.....
13888	17902
	irradiation with fast neutrons and
	X-rays, comparison of harmful
	effect.....
	20813
	Testimony, Chao Fu, defector from
	Communist China, hearing.....
	334



# JANUARY-DECEMBER

	Entry		Entry
Testing:		Textile mills, Middle Atlantic States communities, economic effect of closings-----	11685
metal volumetric standards-----	9208	Textiles:	
nondestructive, infrared technology-----	18263	broad-woven goods--	
State Department of Education personnel, directory-----	19096	blends and mixtures, current industrial reports-----	18679
see also names of substances or objects tested.		current industrial reports-----	9714
Testing laboratories, Brownsville, Tex., laboratory tests of candidate insecticides and acaricides-----	18392	cotton typewriter-ribbon cloth, Tariff Commission report-----	20197
Testing machines, NRL drop-weight test apparatus-----	11173	domestic industry problems, investigations-----	
Testing + training = success-----	2176	hearings-----	13797
Tests, see Examinations--also types, or names of tests.		report-----	19014
Tetracyclines:		effect of insect repellents on fabrics-----	1623
antibiotics of group, translations from Antibiotiki gruppy tetratsiklinov-----	10671	expanded vinyl fabrics for apparel use, standard of trade-----	20338
experimental use in radiation sickness-----	19491	Federal item identification guides for supply cataloging, supplements-----	3659
Tetralogy of Fallot, see Heart diseases.		general repair, techniques, Army technical manual-----	9663
Tetrapyrrois, pigments, intermolecular electron transfer during pulsed illumination, USSR study-----	20811	household fabrics, making flame resistant-----	5825
TEUC, see Unemployment Insurance.		impact phenomena-----	3307
Texarkana, Tex., railroad accident-----	6635	industry--	
Texas:		growth, production, etc. (address)-----	9775
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics-----	4570	research, challenge to graduates (address)-----	13341
broad-woven goods, man-made fiber, current industrial reports-----	20355	wage survey-----	18041
central, petrography and environmental analysis of Pennsylvanian limestones-----	19309	knit cloth for sale, current industrial reports-----	11624
climastological data-----	3517	man-made fiber broad woven goods, current industrial reports-----	3575
cotton varieties planted in early producing section, 1963-----	13151	nonwoven, bonded fabrics, current industrial reports-----	15059
county business patterns, activities covered by OASDI program-----	13286, 18676	textile series reports-----	3307, 11252-253
drought effects in central and south areas-----	19312	tufted products, current industrial reports-----	20358
electric rate book-----	15500	wool broad woven goods, current industrial reports-----	3575
5B redevelopment area, statistical profiles-----	13374-375	woven fabrics, production, inventories, and unfilled orders, current industrial reports-----	3574
floods of Apr.-June 1957-----	8352	see also names of textiles.	
fruit and vegetables, truck-rail and sea-land shipping tests-----	5832	Textolite, glass-base, internal stresses in manufacture of products and table of equivalent terms for chemistry and plastics, USSR study-----	8630
Gulf Coast area, analysis of crude oils-----	16337	TFE, see Polytetrafluoroethylene.	
Gulf Intracoastal Waterway, channel improvement, engineer report--		TFX (tactical fighter experimental) airplane, see Airplanes.	
departmental edition-----	418	Thailand:	
document edition-----	266	agricultural diversification and economic development, case study.	8154
landings, fishery products-----	4233	Clinical Research Center agreement-----	14722
meat industry, structure, etc-----	12044	economic developments, 1962-----	6617
mineral industry, minerals year-book chapter-----	3067	educational foundations and financing of exchange programs, agreement-----	14732
north-central, area between Brazos and Colorado Rivers, Pennsylvanian and lower Permian stratigraphy (series), title page and contents-----	10277	environmental conditions affecting military logistics-----	1434
population, 1960, characteristics-----	18665	environmental factors affecting ground mobility-----	13888
precipitation data, hourly-----	3771	establishing business-----	6605
radiation control, agreement with AEC (remarks)-----	1848	industrial promotion act, 1962-----	2424
west and central, Pennsylvanian and Lower Permian rocks (series)-----	19309	investment factors, 1962-----	2425
ZIP code directory-----	20068	labor conditions-----	20935
Texas & Pacific Ry., accident-----	6635	Laos boundary, study-----	20165
Textbooks, classification scheme-----	12060	parcel post agreement-----	1556
Textile fibers, see Fibers.		postal matters, money orders, agreement-----	1519
Textile machinery, industry, outlook for 1963 and review of 1962-----	5977	reorganization of administrative districts, translations-----	19458
		Thallium, radiochemical separations by amalgam exchange technique-----	18600
		Tham, Anne M. K., relief-----	13684

# INDEX 1963

Entry	Entry
Tharp, James R., occupational wage survey, New York, N.Y., Apr. 1963-----	18034
Tharp, Norman R., relief-----	13509
Thayer, James D., gonococcus, procedures for isolation and identification-----	1405
Theater of operations, <i>see</i> Combat areas.	
Theaters, District of Columbia municipal, use of Capitol and Keith's theater buildings, report-----	17121
Theodolites, measurements of accuracy of manual optical sighting at center of planetary disk-----	9165
Theodore Roosevelt Island, general information-----	1355
Theophilus LAC 78, lunar chart-----	9619
Therapeutics:	
anticoagulant therapy, laboratory techniques used, manual-----	16511
clinic, methods used in treatment of terminal states-----	8803
5th all-Russian scientific-practical conference-----	20825
polymeric therapeutic compounds, USSR study-----	20772
therapy and infestation by pesticides, USSR study-----	17669
USSR, articles from therapeutic archives-----	5135
Therapists, <i>see</i> Exercise therapists—Occupational therapists—Physical therapists.	
Theriosynocoeum wyomingense (Branson, 1935), possible guide ostracode to Salt Wash Member of Morrison formation-----	2344
Thermal balance in F region of atmosphere-----	1333
Thermal conductivity, <i>see</i> Heat transfer.	
Thermal decomposition, <i>see</i> Decomposition.	
Thermal diffusion, <i>see</i> Diffusion.	
Thermal expansion, <i>see</i> Expansion (thermal).	
Thermal gradients, <i>see</i> Temperature.	
Thermal insulation, <i>see</i> Insulation.	
Thermal radiation:	
ablation products injected into hypersonic shock layer-----	18159
propagation of plane acoustic waves in radiating gas-----	12889
thermal radiation incident on earth satellite-----	3142
Thermal reactors, <i>see</i> Reactors (atomic).	
Thermal stresses, <i>see</i> Strains and stresses.	
Thermionic emission:	
diodes, chemical regeneration of surfaces-----	16392
from cesium-coated electrostatic ion-thruster electrodes-----	19916
spacecraft coatings, dynamic thermal vacuum technique for measuring-----	9179, 18137
Thermistor bridge, <i>see</i> Electric bridges.	
Thermochemistry:	
gas analyzer for continuous detection of oxygen-----	18521
properties of 65 elements, their oxides, etc-----	16318
Thermocouples:	
materials, selection and properties, errata-----	16419
noble metal, thermoelectric instability at high temperatures-----	11157
Thermocouples—Continued	
temperature measurement setup, circuit for simultaneous recording of millivolt outputs-----	6517, 17505
Thermodynamics:	
calculations of carbon monoxide-air detonation parameters for initial pressures from 1 to 100 atmospheres-----	1318, 11043
cycles of atomic power stations with MHD generator, USSR study-----	19543
data for gallium and scandium sesquioxides-----	9127
magnesium oxide, periclase, data-----	18103
osmionic cell operation, theoretical studies of behavior of ions-----	14061
properties of—	
beryllium sulfate from 0° to 900°K-----	10967
carbon-dioxide and nitrogen mixtures behind normal shock wave-----	7257
cesium chloride and cesium iodide-----	5484
hydrogen, normal, from low temperature to 300 K and from 1 to 100 atmospheres tabulated-----	1331
nitrogen from 114 to 540°R between 1.0 and 3000 psia-----	3177
65 elements, their oxides, etc-----	16318
strontium chloride and strontium fluoride from 0° to 300°K-----	20971
210 substances involving first 18 elements, to 6000°K-----	19903
yttrium metal and iron pentacarbonyl at high temperatures-----	5482
Thermoelectric generators, optimization of silicon-germanium thermoelectric modules for silent boat design-----	16633
Thermoelectric instability of some noble metal thermocouples at high temperatures-----	11157
Thermoelectricity:	
devices, examples-----	7642
elementary theory, brief survey-----	18239
properties of enargite-type compounds-----	9129
semiconducting compounds for thermoelectric power generation-----	7486
Thermoelectrostatic generators, power generation for space flight applications, exploratory study, errata-----	7242
Thermoluminescence, <i>see</i> Radioactivity.	
Thermometers, clinical, Tariff Commission report-----	11342
Thermonuclear weapons, <i>see</i> Weapons.	
Thesaurus of ASTIA descriptors, chemical supplement-----	1793
Theses, <i>see</i> Dissertations (academic).	
Thiacyclopentanes, 2,2,5-trimethyl- and 2,2,5,5-tetramethyl, identification in Wilmington, Calif., crude oil-----	14517
Thiamine, <i>see</i> Vitamins.	
Thibault, Charles D., materials research abstracts-----	60
Thielaviopsis basicola, associated with declining sweet orange seedlings in Florida-----	20270
Thiols, hemolytic action of thiol poisons, USSR study-----	837
Thiram, tests of arasan 75-endrin 50W rodent repellent on acorns-----	12184
Third challenge, unconventional warfare, facts for Armed Forces-----	7658
Thomas, C. A., safflower diseases-----	11435

# JANUARY-DECEMBER

	Entry		Entry
Thomas, Carolyn, goal of improving quality of foster care, child placing agency experiments in use of group methods for foster parents	9733	Thorium—Continued	
Thomas, Charles M., strategic significance of African raw materials on U.S. planning	1776	deposits of Lemhi Pass area, Idaho-Montana	6548
Thomas, David F., parametric investigation of lunar-orbit-rendezvous scheme	11025	fuel cycle symposium, proceedings, Dec. 5-7, 1962	15007
Thomas, Harold E.: causes of depletion of Pecos River in New Mexico	5037	minerals yearbook chapter	18110
effects of drought in—		powder metallurgy, USSR study	10621
central and south Texas	19312	thorium-uranium base alloys, high-strength ternary and quaternary development	5922
Colorado River basin	20733	Thorium dicarbide, preparation of (Th.U) <sub>2</sub> fuel particles for HTGR	14961
Rio Grande Basin	8335	Thorium isotopes:	
Southwest	14022	ionium-uranium ratios of carbonate rocks, Eniwetok Atoll	19308
meteorologic phenomena of drought in Southwest	605	Th-232, activation measurements of resonance captures in Peach Bottom prototype HTGR critical assembly	7689
Thomas, L. Jean, bibliography of reports issued by Behavioral Sciences Laboratory	18485	Thorium oxide, nickel alloy strengthened by dispersed thorium	14585
Thomas, Louis L., application of electric current during zone refining	4424	Thorsteinson, Fredrik V., length, age, and sex ration of chum salmon in Alaska, etc.	8280
Thomas, T. H., nuclear reactors and earthquakes	20330	Thorsten, Kenneth: occupational wage survey—	
Thomas Jefferson Memorial, general information	3189	Cleveland, Ohio	5441
Thomas Range, Juab County, Utah, geology of beryllium deposits	10286	Davenport-Rock Island-Moline, Iowa-Ill	5445
Thompson, C. J.: identification of 2,2,5-trimethylthiacyclopentane and 2,2,5,5-tetramethylthiacyclopentane in Wilmington, Calif., crude oil	14517	Des Moines, Iowa	10904
microhydrogenation technique for identifying organic sulfur, nitrogen, oxygen, and halogen compounds	1236	Minneapolis-St. Paul, Minn.	10901
Thompson, James H., selecting site for small manufacturing plant	1455	Rockford, Ill.	14464
Thompson, John W.: continued increase in edible tallow anticipated	8148	Sioux Falls, S. Dak.	3034
economic evaluation of hide curing methods	4804	Waterloo, Iowa	5447
Thompson, Lloyd G. D., USAF air base gravity network	5855	Thought:	
Thompson, Robert D., accurate weights and correct scales for livestock producers	1614	and cybernetics, USSR study	8661
Thompson, Robert F., simulated flight investigation of scaled-speed elastic swept-wing bomber, etc.	5532	nature of thinking and problem of modeling it through cybernetics, USSR study	16035
Thompson, William M., jr., natural frequencies and mode shapes of double conical sandwich disks	16404	processes, modeling problem in cybernetics, USSR study	10574
Thompson, Cape, bioenvironmental features of Ogotoruk Creek area, Alaska	4494	Thrallkill, James R., zooplankton volumes off Pacific Coast, 1959	19241
Thomson, James E., effects of sodium polyphosphates on weight of fryer chickens during chilling	11460	Threads, see Screw threads.	
Thomson, Ker C., full-field seismic modeling	18450	Three-problem body:	
Thomson, Robert D., mineral industry of Pennsylvania	3065	celestial mechanics and space flight analysis	5543
Thoracic surgery, see Surgery.		Hill's lunar theory, remarks on	7253-54
Thoracic surgery (USSR periodical): translations	6808, 10745	Lagrange's theory	3129
Thorax, see Chest.		long-period motion of the Trojans as restricted three-body problem, Thuering's theory	12847
Thorium:		restricted, periodic solutions representing analytic continuations of Keplerian elliptic motions	11072
Colorado, New Mexico, and Wyoming, technological and economic problems of resources	3055	Three Forks quadrangle, Mont., geology	12228
		Three Rivers, Tex., Frio River, flood control, authorize survey, report	15248
		Three who came back!	21110
		Thrips, cotton, how to control, general information	32
		Thrushes, geographic variation	7324
		Thrust:	
		aircraft, circular plan form, with peripheral jet, wind-tunnel tests	7245
		ejector-type exhaust nozzles	5516
		limited thrust vectoring, control of large launch vehicle in presence of winds	16409
		nuclear rockets, perigee propulsion for orbital launch	1325
		solid propellant rockets, effect of variation of nozzle throat area	10991
		turbojet, augmentation by combined compressor coolant injection and afterburning	5513

# INDEX 1963

Entry	Entry
Thrusters:	Timber—Continued
electrothermal, effects of—	Georgia..... 19272
nonuniform flows on performance..... 12866	industry's role in providing public recreation facilities (remarks)..... 7380
regenerative and radiation cooling performance..... 20979	Minnesota, northern, changes in harvest..... 12176
see also Ion thrusters.	Missouri counties, timber volume..... 15560
Thuerling, B., theory of long-period motion of the Trojans as a restricted three-body problem..... 12847	national forest sale activities, 1962..... 10216
Thulium sesquioxide, high-temperature heat content and entropy..... 5501	production—
Thunderstorms, electromagnetic induction as basis for theory, Austrian study..... 17628	California national forests, possible impact of recreation development..... 6501
see also Lightning.	Hawaii, opportunities..... 2313
Thunnus thynnus, see Tuna fish.	products—
Thuroczy, Nicholas M., feed manufacturers' and dealers' gains and losses from feed contract program in Midwest..... 8150	industry and its problems (address)..... 19
Thymidine, tritium-tagged, study of mitotic cycle of epithelial cells of cornea, USSR..... 16153	logging, milling and utilization, publications, list..... 12155
Thyroid gland:	publications, price list..... 18278
chronic exposure to hypoxia, effect on blood pressure and thyroid function of hypertensive rats..... 9629	resources—
hormone role in healing burns, USSR study..... 9016	Idaho..... 569
iodide metabolism during thyroid uptake tests..... 16789	southern Cumberland region, Kentucky, highlights..... 19271
Ti-chih hseh-pao (periodical):	sale on a national forest, story..... 9586
translations..... 14403	structural glued laminated, standard of trade..... 15026
Ti-li (periodical):	see also Hardwoods.
translations..... 15753, 15815, 16085, 20916	Timber and Watershed Laboratory, progress report..... 15581
Ti-li hseh-pao (periodical):	Time:
translations..... 16084	frequency standards and measurements, engineering circular..... 3236
TIAS series..... 1515-61,	standard, uniform system, legislation, reports..... 12010, 13749, 17273
3343-63, 5728-42, 7439-56,	Time switches, see Electric switchgear.
9405-38, 11300-329, 13073-90,	Timmins, A. R., thermal-vacuum testing earth satellites..... 16372
14713-734, 16576-612, 18330-337, 20170-190, 21120-136.	Timmons, C. O., stability of plankton oil films to artificial sunlight..... 3226
Tibbitts, Clark, paper, Aug. 16, 1963..... 18368	Timmons, F. L., studies on control of common cattail in drainage channels and ditches..... 13190
Tibet:	Timmons, John F., remarks, Jan. 15, 1962..... 1728
herdsmen around Na-mu Lake, improved living conditions..... 2546	Timpanogos Cave National Monument, general information..... 12930
Tsinhai Tibet region, translations..... 2921	Tin:
Tichenor, Lucille M., research at Institute of Forest Genetics, bibliography, 1927-61..... 2312	mineral industry survey, monthly..... 4234
Ticks, see Cattle ticks—Wood ticks.	minerals yearbook chapter..... 19881
Tidal Hydraulic Committee, see Committee on Tidal Hydraulics.	recovery from tin smelter wastes..... 1245
Tides:	Tingdahl, Marvin A., aerial unloading kit modification KMU-154/E..... 18457
current charts, Narragansett Bay..... 13334	Tip moths, damage in Florida pine plantations..... 17497
tables—	Tipburn, post-emergence chronic symptoms of white pine in eastern Tennessee not caused by insects..... 12182
central and western Pacific Ocean and Indian Ocean..... 15119	Tippets, Frank E., critical heat flux and flow pattern characteristics of high pressure boiling water in forced convection..... 122
Europe, west coast of Africa and Mediterranean..... 11674	Tires:
North and South America—	aircraft, uneconomical procurement by military services under Federal Supply schedules, GAO review..... 6539
east coast, 1964..... 9766	cord and fabrics, current industrial reports..... 3575, 9720
west coast, 1964..... 6040	Federal item identification guides for supply cataloging, supplements..... 3652
T'ien-wen hseh-pao (periodical):	industry, outlook for 1963 and review of 1962..... 4533
translations..... 16109	industry, output per man-hour, indexes, 1947-60..... 1183
Tientsin, China, description..... 992	TIROS (television infrared observation satellite), see Satellites.
Tierney, Paul J., nomination, hearings..... 6291	
Tillage:	
deep plowing of sandy soil..... 1720	
publications list..... 9	
Tillage Machinery Laboratory, see National Tillage Machinery Laboratory.	
Tillman, Tom W., test for speech discrimination composed of CNC monosyllabic words, etc..... 7634	
Timber:	
commercial management, Clark Fork unit..... 6487	
determination of allowable annual cut, western national forests..... 2310	
economic importance in U.S..... 14880	

# JANUARY-DECEMBER

	Entry		Entry
Tishomingo County, Miss., forest inventory statistics.....	3379	Titanium diboride, <i>see</i> Titanium boride.	
Tishomingo National Wildlife Refuge, general information.....	2294	Titanium dioxide, determination of no injury, etc. to U.S. industry by imports from France.....	20201
Tisot, P. R., physical structure of Green River oil shale from Colorado.....	7220	Titanium steel, <i>see</i> Steel.	
Tissue cultures:		Tito, Josip B., revisionist views.....	15998
cells during initial phase of interaction with Sendai virus, luminescent microscopy study, USSR.....	12491	TL series.....	4948
cells in vitro, RNA content and degree of radioresistance, correlative study.....	9632	To protect the peace.....	1577
human and monkey leukocytes, comparative study.....	76	Toasted breadcrumbs of the future (address).....	14711
isolation of enteroviruses from baboon.....	5892	Tobacco:	
organ culture, studies of development, function, and disease, symposium.....	9225	acreage allotments, extend time to file 1963 leases—	
plant, research, status and prospects, Chinese study.....	17917	law.....	15159
Tissues:		reports.....	11822, 13781
adsorptivity, shifts in acute radiation sickness, USSR study.....	17655	acreage allotments, transfer by lease, extend time—	
gaseous nitrogen, of rats exposed to simulated altitude and high concentrations of nitrogen.....	16790	hearings.....	13636
health of supporting tissues in complete denture construction.....	11145	law.....	15147
hypoxia, development during progressive hyperthermia.....	18501	reports.....	11821, 13723
insect, method for cultivating, USSR study.....	2508	burley, light air-cured, market review, 1962 crop.....	14826
otorhinolaryngological organs, spectral luminescence of tissues, USSR study.....	12375	Canadian, production and trade, 1962 survey.....	10207
Titan missile, <i>see</i> Missiles.		commercial farms, costs and returns, 1962, Coastal Plain, North Carolina.....	12045
Titaniferous iron ores, <i>see</i> Ilmenite.		crop summary.....	4236
Titanium:		fire cured and dark air cured, market review, 1962.....	9531
alloys—		flue-cured—	
analysis, recommended methods, GA1-6V-28n, weld heat-affected zones, study.....	12964	inspection, market news, and demonstration service.....	14816
structural transformations, effect of hydrogen, USSR study.....	9318	market review, 1962 crop.....	5788
brazing, with rapid heating, USSR study.....	7046	official standard grades, U.S. types 11, 12, 13, 14.....	14829
contracts, stockpile investigation, hearings.....	19739	foreign agriculture circulars.....	3720
electrorefining, electrolytic methods of preparing cell feed.....	4772	foreign trade, prospects.....	2307
ingot and mill products, current industrial reports.....	5488	hexane and ethanol extractives, total.....	1639
ingots, electroslag smelting, USSR study.....	3574	industries, 1962, statistics.....	6579
mineral industry survey, quarterly.....	686	laws, enforced by Alcohol and Tobacco Tax Division, IRS, guide for law enforcement officers.....	5051
minerals yearbook chapter.....	4235	Maryland, light air-cured, market review.....	7536
oxidation at low temperatures, USSR study.....	18111	nontariff barriers to movement in free world countries.....	12148
powder metallurgy, USSR studies.....	6888	pricing policy of Agriculture Dept., hearings.....	17160
reaction rate of titanium and titanium subchlorides in molten sodium chloride.....	2954	statistics, 1962, report.....	9589
resources, Nelson and Amherst Counties, Va.....	5489	stocks report.....	4238
skin panels, flat and curved, flutter results at supersonic speeds.....	1234	tobacco situation.....	4237
spectrochemical analysis.....	1244	warehouses, insecticide sprays, oil base specifications.....	7533
Titanium boride:		Wisconsin cigar-binder, official standard grades.....	5789
base alloys for cutting tools, USSR study.....	737	Tobacco budworms, <i>Heliothis</i> species rearing on artificial medium, laboratory techniques.....	18391
cemented tungsten carbide with titanium diboride additions.....	1235	Tobias, Jerry V., relation of earphone transient response to measurement of onset-duration.....	16868
Titanium carbide, titanium- and chromium-carbide-base cermets, investigating hardness.....	2845	Tobin, J. Martin, copper oxidation and some irradiation effects.....	14964
Titanium chlorides, reaction rate of titanium and titanium subchlorides in molten sodium chloride.....	5489	Today's challenge to cooperatives.....	11463



# INDEX 1963

	Entry		Entry
Toledo, Ohio:		Topography—Continued	
electric facilities of area, map—	517	scientific notes and summaries of	
occupational wage survey—		investigations	6559
departmental edition—	12798	Siberian conference—	2552
document edition—	11742	topographer's travel notes on south-	
principal electric facilities, map—	2266	eastern USSR—	5184
Tolliver, Wayne E.:		Toponymics, USSR studies—	6823
bachelor's and higher degrees—		Topside sounder, <i>see</i> Satellites.	
conferred during year 1960-61,		Tornadoes:	
summary report—	6347	electrical theory, contributions,	
conferred during year, 1961-62,		Austrian study—	19645
summary report—	10080	observations and data sources, his-	
earned degrees conferred, 1961-		tory	13128
62—	15426	what they are and what to do about	
engineering enrollments and de-		them	9504
grees, 1961—	6333	Torque, exertable on knobs—	7604
enrollment for advanced degrees,		Torre, Flora R., relief—	8027
fall 1960—	12063	Torsion, <i>see</i> Strains and Stresses.	
survey of students enrolled for ad-		Tort claims, <i>see</i> Claims.	
vanced degrees, fall 1961, sum-		Tortricidae, <i>see</i> Moths.	
mary report—	4827	Tory II-A, <i>see</i> Reactors (atomic).	
Tolls:		Touch, active, algorithmic structure,	
Chicago Skyway toll bridge, oper-		USSR study—	12655
ate as freeway—		Tourist trade:	
hearings—	17185	role of public relations in market-	
report—	18872	ing U.S. as tourist destination	
Tolson, Robert H., geometrical char-		(remarks)	5763
acteristics of lunar orbits es-		safeguard and extend personal and	
tablished from earth-moon		human benefits of international	
trajectories—	11057	tourism, problem (remarks)—	18755
Tomato fruitworms, <i>see</i> Bollworms.		tourism in small family farm areas	
Tomatoes:		(paper)	2141
commercial production—	4349	trademark information—	8132
drosophila flies control—	25	Tourists:	
economic feasibility of radiation-		health information for travelers to	
pasteurizing—	19090	U.S.A.—	
mature green, packing, quality,		French edition—	7397
costs, and margins in Lower		German edition—	7407
Rio Grande Valley of Texas—	20287	Italian edition—	7396
prices and market structure in low-		Japanese edition—	7399
er Rio Grande Valley of Texas—	9577	Portuguese edition—	7410
Tombigbee River:		Spanish edition—	7400
Memphis lock and dam, change		motor, boarding houses and camp-	
name—		sites, guidebook, USSR study—	8719
law—	18783	USSR handbook and guide for	
reports—	13704, 18860	mountains of Carpathian Ruth-	
Tomich, Vera, education in Yugo-		enia—	12675
slavia and the new reform—	17369	Toward understanding the atmos-	
Tomlinson, Helen:		phere—	21177
abstracts of Air Force personnel		Towels, current industrial reports—	13296
research reports—		Tower, Frederick J., import tariff sys-	
1954-57—	5882	tem of Honduras—	2385
1958-61—	5883	Towing:	
Tomlinson, W. R., jr., properties of		motor vehicles, exemption from in-	
explosives of military interest—	20324	terstate commerce act—	
Tomorrow is already here—	3298	hearing—	13658
Tonkin, Gulf of, plankton and benthos		report—	13590
distribution, general character-		Towns, <i>see</i> Cities and towns.	
istics—	12575	Toxicants, <i>see</i> Poisons.	
Tontz, Robert L., U.S. agricultural		Toxicodendron querifolium, <i>see</i> Poison	
trade with European Economic		oak.	
Community—	2142	Toxicity, <i>see</i> Poisons.	
Tools, power-activated employing ex-		Toxicology:	
plosives on Capitol grounds,		beryllium, clinical aspects of dis-	
permit use, hearing—	2057	eases, USSR study—	1021
<i>see</i> Cutting tools—Machine tools—		determination of cholinesterase ac-	
Measuring instruments.		tivity, East German study—	6687
Tooth extraction, <i>see</i> Exodontia.		organophosphorus insecticides,	
Topeka, Kans.:		mechanism of selectivity,	
Keyway slum clearance and urban		USSR—	16156
renewal project costs, improper		pharmacology and toxicology	
inclusion of Melan Bridge by		(USSR periodical), transla-	
Urban Renewal Administra-		tions—	817, 5352, 12658,
tion, GAO report—	20716	radioactive substances, USSR	
Municipal Airport, weather obser-		study—	20803
vations, hourly, summary, de-		USSR research—	15984
cennial census—	21161	Toxins, <i>see</i> Botulism—Endotoxins.	
Topographic maps, <i>see</i> Maps and		Toys, industry, outlook for 1963 and	
charts.		review of 1962—	4529
Topography:		Trace elements, <i>see</i> subjects.	
French Indochinese military terri-		Tracer studies:	
tory, French study—	17609	cerium and sulfur distribution in	
research, 1962—		steel—	14521
short papers—	6559	electrometallurgical processing—	9125
synopsis of results—	608		

	Entry		Entry
Tracer studies—Continued		Trade centers:	
hydrobiological research, radioactive carbon use, USSR study—	16248	overseas, profitable markets for your products—	203
littoral drift near San Francisco—	6359	overseas, profitable sales—	13351
radioactive tracers in studying ability of synanthropic flies to cross water barriers, USSR study—	1124	Trade expansion act of 1962, <i>see</i> Commercial treaties.	
rhodium 102, high-altitude tracer experiment, stratospheric results—	1732	Trade fairs, <i>see</i> Fairs.	
Tracey, Joshua I., Jr., trace elements of volcanic rocks of Guam—	15611	Trade marks, <i>see</i> Trademarks.	
Track firing programmer, modification—	5857	Trade Mission to Sweden, report, 1963—	17505
Tracking:		Trade Negotiations, Office of Special Representative for, <i>see</i> Special Representative for Trade Negotiations, Office of.	
compensatory, equalization teaching machine, design and operation—	11183	Trade practices:	
determining time-invariant and time-variant dynamic characteristics of human pilots—	11078	rules, proposed—	3681
international, of space vehicles, 5th anniversary, program—	5507	rules, wire rope—	2284
satellite track computation for display purposes—	7368	Trade routes, United States foreign, essential—	14489
tracking mechanisms and couplings for cargo resupply train concept—	21143	Trade schools, <i>see</i> Technical education.	
training vehicular research tool—	9272	Trade unions, <i>see</i> Labor unions.	
USSR satellite equipment—	6853	Trademarks:	
Tracking stations:		code of Federal regulations—	4922
Baker-Nunn camera, operational aspects—	11485	decisions, weekly—	3983
space vehicles program, agreement with—		decisions, yearly, 1962—	7384
Australia—	11310	departmental edition—	6082
Bermuda—	21135	document edition—	14639
Mexico—	16594	general information, 1963—	7385
Spain—	21128	index, 1962—	6259
tracking systems, mathematical models and errors, theory, errata—	3134	laws, investigation—	8058
Tracks, <i>see</i> Rubber tracks.		authorization, report—	3983
Tractors:		report—	
current industrial reports—	3574, 9721	lists, in official gazette—	
Federal item identification guides for supply, cataloging, supplements—	3652	protection of industrial property, convention—	
manufacture, use of powdered metal products, USSR study—	2846	report—	20545
USSR industrial development, translations—	840.	text—	20518
872, 902, 976, 1009, 1100, 2473, 2635, 2782, 2919, 2939, 5190, 5345, 6654, 6664, 7010, 8675, 8743, 8985, 10381, 10422, 10540, 10602, 10664, 12283, 12325, 12551, 12645, 14132, 14138, 14255, 14389, 15695, 15702, 15737, 15792, 15795, 15807, 15822, 16018, 16126, 16198, 16221, 16228, 17660, 17750, 17765, 17804, 17998, 19694, 19715, 20791, 20821, 20873, 20898.		protection of owners—	
USSR price list—	15804	effects of bill, summary-analysis—	20449
Tracy, Paul H.:		hearings—	13660
layouts, etc., for automation of dairy plants processing—		report—	15232
milk and half-and-half—	7572	publications, price list—	5682
milk, half-and-half, cream, chocolate drink, and buttermilk—	16746	questions and answers—	9323
Trade, <i>see</i> Commerce—Retail trade—		regulations of Sweden—	5075
Service trades—Wholesale trade— <i>also</i> names or classes of commodities traded.		rules of practice with forms and statutes—	14611
Trade agreements, <i>see</i> Commercial treaties.		tourists import information—	8132
Trade associations:		Trades, <i>see</i> Occupations—Technical education— <i>also</i> names of trades and types of workmen.	
meetings of officials with Banking and Currency Committee, House, hearings—	7988	Trading with the enemy:	
small business, use of programs—	1484	act, amend, report—	20590
		administration of act, investigation—	
		extension, report—	6262
		report—	8075
		Traffic:	
		better safety and service control measures (remarks)—	20119
		carload way bill statistics, 1961—	
		all commodities—	10348
		forest products—	10350
		mileage block progressions by commodity groups and classes—	14075
		channelized, flexible pavement design criteria—	2229
		international, in radioactive materials (remarks)—	9697
		pneumatic counters, recreation visits and use estimates, instructions for using—	12193
		St. Lawrence Seaway report, 1962—	11260
		<i>see also</i> Air Traffic—Transportation.	
		Traffic control:	
		devices uniformity progress (remarks)—	1433
		uniform devices for streets and highways, manual, construction and maintenance operations—	16541
		<i>see also</i> Air traffic.	

# INDEX 1963

Entry	Entry
Traffic decisions, <i>see</i> Interstate Commerce Commission.	Training—Continued
Traffic safety, <i>see</i> Safety of life.	partial-panel control skills..... 5658
Traffic Safety, President's Committee for, <i>see</i> President's Committee for Traffic Safety.	right-of-way program, Public Roads Bureau, opportunities..... 11251
Traffic signals, <i>see</i> Signal systems.	summer science programs for high-ability secondary school students, 1963..... 3199
Trafficability, soils, tests..... 13884	training for development..... 12262
Trailblazer, <i>see</i> Rockets.	USSR—
Trailers:	programs for training Africans... 6345
Federal item identification guides for supply cataloging, supplements..... 3652	scientific and medical..... 699
house, transportation, traffic management procedures..... 10037	Virginia State College, program for unemployed and unskilled adults, evaluation (remarks).... 14436
liens, alphabetical file by D.C. Recorder of Deeds, eliminate—	VRA workshops—
law..... 17019	15th annual workshop, proceedings..... 9483
reports..... 13625, 13733	proceedings dealing with small business enterprises..... 16644
mobile homes, bibliography..... 21107	women, trained workers for future..... 18371
rolling liquid transporter trailer kit, evaluation..... 7483	young workers, their special needs..... 10885
trains, lateral stability..... 21143	<i>see also</i> Employee training—Job analysis—Learning—Military education—Naval education—Staff training—Vocational education—also subjects.
truck—	Training devices:
current industrial reports..... 3574	and aids, Federal item identification guides for supply cataloging, supplements..... 3660
summary for 1962..... 9722	flight, operational engine simulation methods, studies..... 18227, 19998-20000
industry outlook for 1963 and review of 1962..... 7732	guide, Naval Training Device Center..... 3235, 9274-75, 14634, 16464, 18255
rail and sea-land shipping tests with Texas fruit and vegetables..... 5832	Training of employees, <i>see</i> Employee training.
USSR industrial development, translations..... 14389	Training schools, <i>see</i> Reformatories.
USSR price list..... 15804	Trains, <i>see</i> Railroads.
Trails:	Trajectories:
explorers' trails in U.S., maps, list..... 1192	analysis, variable-drag payload ejected from vehicle in low earth orbit..... 16402
geology of Ch'i-lien Mountains, Communist Chinese study..... 14104	banking positions, effects on lateral and longitudinal ranges of hypersonic global reentry vehicle..... 7274
national forests, construct and maintain, hearings..... 17331	lunar missions—
Trainers (devices), <i>see</i> Training devices.	abort..... 11039
Training:	abort, effect of lift on separation distance and loads..... 11055
AID participant for social and economic development of co-operating countries..... 12262	abort from manned landing and return to rendezvous in 50-mile orbit..... 1306
apprenticeship and training representative, examination announcement..... 20387	circumlunar navigation theory, transition matrix assumptions..... 20980
creative scientist, training and role (remarks)..... 9694	earth-moon space with symmetrical free return properties, lunar flight study series..... 12883
each man has an aptitude (address)..... 14435	entry conditions at lunar sphere of influence applicable to near-moon trajectory and impact conditions..... 14563
for job under MDTA..... 12081	landing using jet VTOL test vehicle, flight evaluation..... 5601
help for disabled through vocational rehabilitation..... 9484	orbit descents..... 3143
industrial retraining programs, performance of older workers..... 14475	orbits, geometrical characteristics established from earth-moon transfer..... 11057
job instruction, supervisor development program, basic course..... 4445	orbits, returning from moon to specified geographic landing area..... 11038
jobs, training, and you, questions and answers..... 9030	parameter study of insertion conditions..... 19944
manpower—	return, analysis..... 16403
and training, trends, outlook, programs..... 9032, 14439	terminal landing, analog simulation..... 16396
Navajo land..... 12067	three-dimensional problems, optimal ascent from lunar surface..... 12852
report, 1963..... 9031	vehicle position in earth-moon space..... 12878
manpower development and training act—	
activities, report of Secretary of Health, Education, and Welfare..... 6342	
amendments of 1963—	
hearings..... 17325	
reports..... 17278, 18913	
explanation..... 5428	
manpower utilization catalyst..... 14441	
manpower development and training program—	
activities, report of Secretary of Labor..... 7139	
projects approved July 1, 1962—	
June 30, 1963..... 19103	
suggested curriculums..... 2161-62	
under act of 1962..... 2173	

	Entry
Trajectories—Continued	
lunar origin of tectites	5584
optimum-low acceleration, for interplanetary transfers	3131
simulation applicable to stability and control studies of large multi-engine vehicles	18143
space, analysis, acceleration hodograph and its application, research study	19899
variational method for optimization of interplanetary round-trip	7279
Tranquilizing drugs, see Atropine	
Chlorpromazine—Epinephrine	1932
Trans World Airlines, Inc., accident	
Transcripts, court reporters furnish for District Courts, report	11845
Transducers:	
physical, for sensing oxygen	18499
point-contact, for ultrasonic testing	12965
pressure-pulse, seismic velocity study	11580
Transfer of heat, see Heat transfer	
Transformation temperatures, phase transformations in reduction of U <sub>2</sub> O <sub>5</sub> , problems, USSR study	12414
Transformers, see Electric transformers	
Transfusion, dry leucocytic mass in leucopenic conditions, clinical effectiveness, USSR study	5115
Transhydrogenase, activity in acclimatization to high altitude	4410
Transistorized control systems for information storage device using piezoelectric substances, USSR	5211
Transistors:	
building blocks for data instrumentation	9213
curve tracer, Tektronix 575, Navy calibration program, technical manual	9296
irradiation effects of 40 and 440 Mer protons	5574
micropower logic circuits	5573
power, cooling in space environment	16374
radios, Tariff Commission report	11346
test set TS-1294A/U, Navy calibration program, technical manual	16489
voltage stabilizer, transistorized	9192
Transit systems, see Local transit	
Transitions and hovering flight characteristics of tilt-duct VTOL research aircraft	1291
Translating machines:	
algorithm, from Russian to Lithuanian	14341
foreign developments, translations	2981
8478, 8651, 8765, 8817, 10754	
10809, 10852, 12383, 12484, 14097, 14148, 14195, 14254, 14321, 14341, 14368, 15825, 15992, 16626, 17582, 17705, 17802, 20819	
algorithm for recognition of machine-written symbols	875
algorithms associated with word systems, USSR study	12701
bibliography	14603
computer and information technology	19748
French translated to Russian, USSR study	12721
machine translation and language reform	10465
new electronic equipment for printing industry	826
Russian-Chinese systems, comparison of old and new programs	8691

	Entry
Translating machines—Continued	
machine translations, bibliography	15029
mathematical linguistics, Rumanian study	8525
translating machines and applied linguistics, translations	14321
Translations:	
Air Force Department	85
1777-78, 7641-45, 13220-221, 14923, 18508-521, 20314-315	
atomic energy, title list and cross reference guide, supplement	11582
Chinese Communist terms, JPRS handbook	19689
medical, bibliography, 1959-62	9232
National Institutes of Health Library, selected list	11110
Russian serials into English, etc., list	1191
technical—	
bibliography, OTS periodical	4232
periodicals translated in, basic list	5957, 15025
National Aeronautics and Space Administration	1319-20, 3164-68, 7294-99, 9192-97, 11082-85, 14592, 18169-181, 19941-942, 21009-12
Transliteration, Persian language	18054
Transmission and reflection of electrons by aluminum foil	9217
Transmission lines, see Electric lines—Waveguides	
Transmitters, educational television apparatus, performance standards	13851
Transonic speed, see Air speed	
Transpiration, plant, research, 1961	9587
Transplants, see Grafting (physiology)	
Transponders, for Nike-Hercules guided missile system, over procurement by Army Dept., GAO report	14001
Transport aircraft, see Aircraft	
Transport airplanes, see Airplanes	
Transport equations, see Equations	
Transportation:	
African mining industry, problems in central and south basins, USSR study	15870
air—	
in New Hampshire	1453
national military airlift—	
hearings	18925
subcommittee report	18926
translations from Stintu si tehnica	8924
allowances under cancelled, etc., orders, authorize, report	13539
Armed Forces dependents, baggage, etc., advance return, report	13540
code of Federal regulations	6434-45, 10169, 13931
Commercial Fisheries Bureau research and service activities, 1961, report	10194
Communist China, translations	652, 913, 1033, 2577, 2621, 2641, 2837, 2886, 5375, 6740, 6869, 6937, 6984, 7092, 8455, 8532, 8599, 8844, 8964, 10439, 10529, 12699, 14182, 14241, 14367, 14378, 15754, 16015, 16090, 16189, 17685, 17754, 17816, 17903, 19374, 19462, 19488, 19666, 19702, 19738, 20799, 20877
Communist China, water transportation	7012
costs for Members of Congress travelling outside U.S., limit, reports	13527, 13531
cybernetics in municipal transportation, East German study	8955

# INDEX 1963

	Entry
Transportation—Continued	
Defense Dept. civilian permanent change of station, regulations	20305
economics, monthly comment	4242
equipment management in Navy	1611, 7522
facilities development termination, agreement with India	13077
Federal agencies, GAO guidance manuals	4994-95, 19275-277
Federal laws, amendments, proposal, hearings	2089
Federal programs against curtailed development (address)	6045
freight, regulatory problems (remarks)	10155
House Members, expenses, reimbursement, amend law—	
law	15149
reports	13583, 13764
house trailers, traffic management procedures	10037
importance in promoting world trade (remarks)	13352
importance to national security (remarks)	7813
interstate, animals and poultry, code of Federal regulations	18408
lines—	
Atlantic, Gulf, and Pacific Coasts	6377
Great Lakes system, 1963	13882
Mississippi River system and Gulf Intracoastal Waterway—	
marketing and transportation situation	20652
merger, opportunity for progressive national policy (remarks)	3885
migratory game birds, regulations, 1963-64	18756
1963-64	15535, 17461
military air transportation, 1963—	
hearings	11903
report	13622
military oversnow transport	19138
MILSTAMP, military standard transportation and movement procedures, joint regulation	17351
modernization, new concept of research (remarks)	18753
motor vehicles of Govt. employees in Alaska—	
hearing	15311
report	18852
National Capital region, finance and organization recommendations	1335
national defense problems and plans (remarks)	9779
national policy and President's program (remarks)	6051
national system, strengthen and improve, hearings	2054, 15319, 17176
North Vietnam, non-mechanized facilities, role and problems	2751
papers prepared for United Nations conference	2438
planning, unified for permanent improvement (remarks)	9787
poultry and poultry products, regulations	11426
preparedness (remarks)	13380
preparedness, Emergency Transportation Office focal point for mobilization of Nation's civil transportation resources (remarks)	9791
problems, stated in terms of graphs, USSR study	15930
projections to 1976 and 2000	3250
publications, price list	11220

	Entry
Transportation—Continued	
pupils—	
State plans for financing	6323
State supervisors, directory	2170
statistics, 1961-62	19120
remains, etc., Federal employees dying in Alaska and Hawaii, report	17282
research activities of Commerce Dept. (remarks)	20392
research program, problems (remarks)	4652
research projects of Commerce Dept. (remarks)	15124
statistics in United States, 1961—	641, 2453, 5107, 14081
system, development in U.S.	13240
transportation series, Engineer Corps	6377, 13882, 20642
uncrated household goods, Defense Supply Agency regulations	10036, 17346
urban mass, Federal aids available, fact sheet	2364
urban mass transportation act of 1963—	
hearings	6290, 7990, 8099
reports	7964, 8049-50
summary	8095
urban planning, Governments program of encouragement (remarks)	9784
USSR, North, industrial development	678
USSR, translations	684, 765-766, 843, 1148, 2493, 2501, 2562, 2630, 2870, 6651, 7084, 7108, 8815, 8958, 10674, 10706, 10861, 10875, 12591, 14166, 14252, 14351, 16172, 17821, 17843, 19410, 19586
Uzbekistan, translation	5215
Washington looks at transportation (remarks)	9792
water, Communist China, translations	14378
water use of MarAd surface effect ships for profit (paper)	9095
see also Air carriers—Carriers—	
Freight rates—Railroads—	
Roads and highways.	
Transportation Corps, Army: optimization of silicon-germanium thermoelectric modules for silent boat design	16633
role in highway, water terminal, railway, and aviation operations	13240
Transportation maps, see Maps and charts.	
Transportation of persons, see Travel.	
Transportation of school children, see Transportation.	
Transporters, see Cargo carriers.	
Transuranium, spontaneous fission and synthesis of far-transuranium elements, USSR study	7024
Transverse magnetoresistance of aluminum	18254
Traprocks, general information	19836
Traps, see Animal traps—Fish traps—	
Insect traps.	
Trask River, waterpower resources of basin	17531
Traumas, see Injuries.	
Traumatism: shock, protective effects of pretreatment with adrenocorticotrophic hormones	14919
USSR, translations	12371
Travel: air—	
accommodations, 1st-class—	
defense contractors, Defense Dept., GAO report	17506



# JANUARY-DECEMBER

	Entry
Travel—Continued	
air—Continued	
accommodations, 1st-class—Con.	
District of Columbia Govern-	
ment, GAO report	12203
Federal Housing Administration	
personnel, GAO review	5004
national office, Internal Revenue	
Service, Treasury Dept., GAO	
review	591
Public Housing Administration	
personnel, GAO review	590
Veterans Administration, GAO	
review	10265
allowances under cancelled, etc., or-	
ders, authorize, report	13539
authorizations—	
Agriculture Committee, House,	
reports	7972, 17152, 18859
Banking and Currency Commit-	
tee, House, report	7961
Education and Labor Committee,	
House, report	7965, 9896
Government Operations Commit-	
tee, House, report	6110
Interior and Insular Affairs Com-	
mittee, House, report	18892
Interstate and Foreign Com-	
merce Committee, House, re-	
ports	11817, 18858
Judiciary Committee, House, re-	
ports	7973, 17151
Merchant Marine and Fisheries	
Committee, House, report	17153
business expenditures, deductibility,	
testimony of commissioner of	
internal revenue	8104
business in New Hampshire	1485
businessmen, income tax deduc-	
tions, questions and answers	15643
Defense Dept. civilian permanent	
change of station, regulations	20305
dependents to overseas areas, infor-	
mation, Army pamphlet	18552
expenses for applicants invited to	
visit department for possible	
future employment, hearing	15312
expenses for student trainees ap-	
pointed to positions where	
manpower shortage exists,	
amend administrative expenses	
act—	
hearing	15313
law	18787
reports	11954, 18853
expenses, 1962 rules for deducting,	
and new 1963 recordkeeping	
rules for substantiation	6584
foreign—	
effect on domestic outdoor rec-	
reation	1380
violation of restrictions, hearing	18953
visitors to U.S.A. (address)	5762
health information—	
Africa, including Malagasy Re-	
public and neighboring is-	
lands	16497
Asia, etc., Australia, and New	
Zealand	16498
Europe	16499
Mexico, Central and South Amer-	
ica, and Caribbean	16500
health information for travelers to	
U.S.A.—	
French edition	7307
German edition	7407
Italian edition	7396
Japanese edition	7399
Portuguese edition	7410
Spanish edition	7400
House members, expenses, reim-	
bursement, amend law, re-	
ports	13583, 13764
increase in U.S. role of public re-	
lations (remarks)	5763

	Entry
Travel—Continued	
information offices maintained by	
States in U.S.	3380
international—	
immunization information	21087
information sources	3389
Members of Congress outside U.S.,	
per diem allowances and trans-	
portation costs, limit, reports	13527, 13531
passenger, between U.S. and for-	
eign counties	4140, 5044, 14046
regulations of State Dept., viola-	
tions by U.S. citizens, hear-	
ings	17189
revolution in mobility, better inter-	
national understanding and	
new economic forces (re-	
marks)	18755
southeastern USSR, topographer's	
notes	5184
space—	
present and future, USSR stud-	
ies	17834
sensory deprivation, pain and	
personality and relationships,	
study	18166
USSR development, translation	722
visit USA campaign (excerpts from	
statement)	11366
visit U.S.A. program (remarks)	16964
Travelers:	
abroad, health hints	16534
so you want to import a pet	12034
Travis, B. V., classification and cod-	
ing system for compilations	
from world literature on in-	
sects and other arthropods that	
affect health and comfort of	
man	1437
Travis, Herman, mobility and worker	
adaptation to economic change	
in U.S.	18016
Travis, R. E., electron beam welding	
for fabrication of ultra high	
strength steel rocket motor	
cases	9277
Trawlers:	
Russian traffic in U.S. territorial	
waters—	
hearings	15302
report	18929
stern-ramp, construction, hearings	12011
Trawls and trawling:	
Great Lakes trawler conversion	4957
line-trawl fishery for cod and had-	
dock, Chatham, Mass.	17450
New England coast, 1961, progress	
report on studies	8270
southeastern coast of U.S., snapper	
trawling explorations	8272
trawling survey of southern Lake	
Michigan	13950
Treadwell, Mattie E., Hurricane	
Carla, Sept. 3-14, 1961	180
Treasury:	
daily statement	3581
decisions—	
Jan.-Dec. 1961	7502
weekly	4245
Treasury bonds, see Bonds of United	
States.	
Treasury certificates of indebtedness:	
3½ percent, series D-1963	1573
3½ percent—	
series A-1964	7488
series B-1964	11354
Treasury Department:	
Accounts Bureau, Chicago Regional	
Disbursing Office, automatic	
data processing operations,	
GAO review	12212
activities, general information	16638

# INDEX 1963

	Entry		Entry
Treasury Department—Continued		Trees—Continued	
appropriations, 1964—	7985, 9997	shelterbelt, growth response follow-	15568
hearings	13413	ing sod removal	
law	7941, 9985, 11814	southeastern species, board-foot and	
reports	13432	cubic-foot volume computing	10243
Assistant Secretary, additional—	13432	equations	20705
law	9988, 13556	standing, calculating optimum	20705
reports	4244	product combinations	10252
bulletin	3386	what we get from trees (poster)—	10252
department circulars	11352-353, 13101-102, 14756-146, 16635-636, 20210, 21144-146	windbreak experiments, Cheyenne, Wyo	20294
public debt series	1573-75, 7488-93, 11354-355, 13103-104, 14758, 16637, 20211-213	see also Brush—Citrus trees—Hardwood—Tree planting—also names of trees.	
foreign exchange operations	8261, 19209	Trefoll, production for pasture and hay	5819
press releases	4098	Tremant, Robert A., operational experiences and characteristics of X-15 flight control system	3128
report, 1962—	14755	Trematodes, see Flukes.	
departmental edition	13453	Tremmel, Ernest B.: remarks—	
document edition		Mar. 14, 1963	18608
Treasurer of United States, custodianship functions, GAO audit, report	12196	Sept. 25, 1963	18611
Treasury enforcement agents, general information	13107	Tremont quadrangle, Pa., geology of rocks of Pennsylvania age	5013
Treasury notes:		Trenton, N.J.: occupational wage survey—	
3% percent—	11355	departmental edition	9056
series B-1966	7490	document edition	7839
series B-1967	16627	Treponema pallidum, darkfield microscopy for detection and identification	5683
3% percent, series F-1964		Trescott, Charles D. Jr., transonic investigation of longitudinal characteristics of low-aspect-ratio wing-body configurations etc	14586
Treaties:	5743	Trevorrow, George C., nomination, hearing	8127
In force, list		Triassic period, clay minerals in rocks of Colorado Plateau	19296
Soviet treaty violations, record of broken promises	7657	Triaxial equipment, mine rock testing	20972
treaties and other international acts series	1515-61, 3343-63, 5728-42, 7439-56, 9405-38, 11300-329, 13073-90, 14713-734, 16576-612, 18330-337, 20170-190, 21120-136	Trichantha, revision of Gesneriaceae	19975
treaties and other international agreements, 1962	5745, 16613	Trichinosis, how it effects you, your bugs, etc.	16744
see also Commercial treaties—also names of countries—also subjects.		Trichloroethylene, flammability	5502
Treatment of psychiatric disorders with metrazol, bibliography	9467	Trichlorophenoxyacetic acid, use in killing hardwood culls, method and cost study	8291
TRECOM technical reports	13009-100	Trichlorosilane, refining by rectification, USSR study	17886
Tree nuts, see Nuts.		Trichoptera, see Caddis flies.	
Tree planting:		Trident, long range report of Bureau of Commercial Fisheries	19225
annual report 1962	8307	Trilobites, Glyptagnostus and associated trilobites in United States	606
machine, fertilizer attachment, progress report	10	Trimble, Donald E., geology of Portland, Oreg., and adjacent areas	14015
pays, put idle land to work growing wood	20202	Trimble, George R. Jr., hybrid poplar grows poorly on acid spoil banks in West Virginia—13 years of forestry research in West Virginia, progress report from Forest Service Timber and Watershed Laboratory	15581
tree planters' notes	2316-17, 6527, 10250, 20712	Trimpi, Robert L., expansion tube for producing high-enthalpy gas flows	5614
see also Forest planting.		Trinidad and Tobago: agricultural production, indices—investment guaranties, agreement—scheduled airline services between U.S. and Caribbean area, agreement	2135, 9428, 3357, 8713
Trees:		translations	
bark characteristics and fire resistance, literature survey	12195	Trinity River:	
basal area table for diameters from 1 to 240 inches	10225	East Fork, engineer report—departmental edition—document edition	4854, 4681
California recreational areas, judging hazard, guide for professional foresters	15583	Trinity River division, see Central Valley project.	
diameter growth in dry limestone hills	8294		
fertilized, squirrel preference for cones	12183		
forest—internationally dangerous diseases	18437		
performance in Olustee Arboretum	19269		
plantations of northern Lower Michigan	573		
injectors, field trial for weeding in West Virginia	20701		
nursery products, production and sales, 1961 and 1962	14736		

# JANUARY-DECEMBER

	Entry		Entry
Triodes, magnetic 90° flat-plate for direct energy conversion-----	1309	Trudy Instituta Okeanologii (periodical): translations-----	8920
Trip to upper reaches of Yellow River-----	1138	Trudy vsesoyuznogo gidrobiologicheskogo obschestva (periodical): translations-----	8474
Trisler, Geneva H., relief-----	9842, 19004, 20421	Truk Islands, geology and petrography of volcanic rocks-----	8338
Triticum, <i>see</i> Wheat.		Truman, Harry S., <i>see</i> President of United States.	
Tritium:		Trust funds, <i>see</i> Trusts and trustees.	
heavy hydrogen isotope, properties, etc., USSR study-----	20779	Trust Territory of Pacific Islands: administration, report to United Nations-----	11298
tagged thymidine, study of mitotic cycle of epithelial cells of cornea, USSR-----	16153	claims of residents, report-----	7914
Trogoderma, <i>see</i> Beetles.		compensation for occupancy of Kwajalein and Dalap Islands, report-----	9861
Trojan group, long-period motion of the Trojans as restricted three-body problem, Thuering's theory-----	12847	economic and social development, promote, report-----	15256
Troops, <i>see</i> Armed Forces--Army.		High Commissioner, report 1962-----	17546
Tropical forest notes-----	8294-96	naval administration, trusteeship period, 1947-51-----	14623
Tropics, wood resistance to biological deterioration-----	3221	Trustees in bankruptcy, power, amend bankruptcy act, report-----	13576
Troposphere:		Trustees of Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, <i>see</i> Board of Trustees of Federal Old-Age and Survivors Insurance Trust and Disability Insurance Trust Funds.	
communication circuits, equipment characteristics and their relation to system performance-----	3176	Trusts (industrial):	
upper layers, aerodynamic conditions of airplane buffeting, USSR study-----	6679	administered prices, compendium of public policy-----	10018
Trotters Shoals project, construction, hearings-----	13667	Antitrust and Monopoly Subcommittee activities, 1962, report-----	9980
Trouble shooting, electronic equipment, self-study textbook-----	9270, 11150	antitrust laws--	
Troubled air, chart book-----	3299	administration, investigation authorization report-----	6275
Trousdell, K. B., inheritance of branch length in young loblolly pine progeny-----	12181	manufacturing industry, concentration ratios, 1958-----	2097
Trousers, tropical wool, Army and Marine Corps, unnecessary costs incurred because of failure to standardize, GAO report-----	20722	taxation of dispositions of property pursuant to orders, report-----	4745
Trout, Otto F., Jr., design, operation, etc., of Langley 11-inch ceramic-heated tunnel-----	5594	European Common Market, antitrust developments, hearings-----	13814, 17315
Trout:		manufacturing industry, concentration ratios, 1958, print additional copies, reports-----	8078, 9984, 11863
cutthroat Yellowstone Lake equilibrium yield and management-----	17462	Trusts and trustees:	
growth of intraspecies biological forms of Arctic char <i>Salvelinus alpinus</i> of Kamchatka, USSR study-----	20812	common trust funds, overlapping responsibility and conflict in regulations--	
hatchery, description and purpose, steelhead, development program in California, initiate hearings-----	4941	hearing-----	13648
Yellowstone cutthroat, natural variations in spotting, etc-----	299	report-----	13553
Troxell, Margaret M., address, Jan. 14, 1963-----	19243	common trust funds, survey, 1962-----	13938
Troy, N.Y.:		District of Columbia--	
occupational survey--		deeds of trust, appointment of new trustees by agreement of parties, report-----	6154
departmental edition-----	12800	testator to add properties to existing trusts, report-----	7975
document edition-----	11744	highway trust fund, financial conditions and operations, 1962 report-----	6090
Trozera, T. A., mechanical properties of reactor materials-----	14967	legal investments for trust funds in D.C., list-----	4800, 15410
Truck crops, <i>see</i> Market gardening.		social security trust funds, status, trust indenture act of 1939 and general rules, etc., effective Aug. 1, 1963, text-----	18303
Truck-rail and sea-land shipping tests with Texas fruits and vegetables-----	5832	trust indenture act of 1939, releases, SEC-----	4246
Truck trailers, <i>see</i> Trailers.		<i>see also</i> Charitable trusts.	
Trucks:		Truszyński, Gerald M., space communications-----	5611
lift, development and manufacture in USSR-----	17778	Tsaldam Basin, China, sketches, recent changes-----	2515
powered industrial, comparison of State safety codes with ASA, chart-----	10887	Tsander, Fridrikh A., biography-----	1123
<i>see also</i> Motortrucks--Trailers--Utility trucks.		Tsinghai Province, China, Tsinghai-Tibet region, translations-----	2921
Trudy Glavnoy Geofizicheskoy Observatorii imeni A. I. Vovskova (periodical): translations-----	10397		

# INDEX 1963

	Entry		Entry
Tsinghai-Tibetan Plateau, frozen earth, preliminary studies-----	8870	Tulelake, Calif. : durum wheat acreage allotments in area, increase-----	15143
Tsitlogiya (periodical) : translations-----	10792	law-----	13597
Tsivoglou, E. C., waste guide for uranium milling industry-----	9350	reports-----	9987
TSO series-----	8221, 13903	Tuliptree : yellow-poplar-----	
Tsunami (tidal wave) : Coast and Geodetic Survey as central depository of data, hearings-----	4756	potential growth indicated by past-----	15575
Tsvetnyye metally (periodical) : translations-----	2066	seedlings, survival, some effects of competition-----	10219
Tuberculosis : beds in hospitals and sanatoria, index-----	5098	site index curves-----	6520
control in USSR, stages in development-----	993	Tully, G. R., Jr., process for making graphite less permeable to gases at high temperatures-----	14960
fluorescence and phase-contrast bacterioscopic diagnosis, effectiveness, USSR study-----	12520	Tulsa, Okla., Municipal Airport, weather observations, hourly, decennial census-----	11398
laboratory methods, VA-Armed Forces cooperative study-----	9475	Tumors : atlas of tumor pathology-----	6312
problem in 1963, and overview-----	9359	brain, use of betatron and radioactive gold in treatment, USSR study-----	19388
reported data-----	3297	Brown-Pearce, ultrastructure characteristics of nucleolus in cell nuclei, USSR study-----	19508
status of disease at present in U.S.-----	18295	Ehrlich, ascitic form, morphological action of antibiotics olivomycin and krutisin on cells-----	6704
Tuberculosis in animals : eradication-----		gastro-intestinal, induced by radioactive cerium (Ce-144), USSR study-----	15844
cooperation with States, summary-----	4217	lymphosarcomas, USSR medical tests-----	6668
State-Federal cooperative program, statistical tables-----	15, 18407	malignant neoplasms, disease and death rate of USSR population-----	830
good identification essential, to effective traceback-----	13157	melanotic, of skin-----	6312
Tubes : detonation, formation of waves with variable internal geometry-----	12887	neoplastic diseases according to autopsy data, 1939-58, USSR studies-----	17982
Federal item identification guides for supply cataloging, supplements-----	3655	patients, proper feeding during radiation treatment-----	20880
foods tubed for in-flight feeding-----	4394	problems of clinic and treatment of malignant neoplasms (USSR periodical), translations-----	15839
heat-exchanger, mechanized brazing, USSR study-----	17676	surgical treatment, USSR study-----	15731
K-27 sheet assemblies procured from Fairbanks, Morse & Co. by Union Carbide Nuclear Co., overpricing under AEC cost-type contract, GAO report-----	19284	tumorous lesions of hemopoietic system, classification, USSR study-----	17656
microwave, materials useful in design, manual-----	1780	types found in slaughtered animals by Federal meat inspectors in 8-year survey-----	9554
stainless steel tubing for reactor fuel cladding, evaluation-----	5933	<i>see also</i> Cancer—Oncology.	
TFE-aurocarbon (polytetrafluoroethylene) resin electrical insulating tubing, standard of trade-----	13260	Tuna fish : albacore, seasonal movement off Pacific Coast, 1962 review-----	17449
thin wall tubing, slow cycle strain fatigue-----	5931	food study of albacore tuna in central and northeastern Pacific-----	2288
tire and tube industry, outlook for 1963 and review of 1962-----	4533	Indian Ocean scombridae, preliminary field guide, National Museum-----	16430
<i>see also</i> Electron tubes—Klystrons—Shock tubes.		larvae of mackerel-like fish from Indian Ocean, USSR study-----	14186
Tubes (inner), <i>see</i> Inner tubes.		northwestern Atlantic oceanic waters, distribution-----	4952
Tubing, <i>see</i> Tubes.		recipes, quick, cool, for salads, casseroles, etc-----	13966
Tucker, S.G., prefabricated airfield and road surfacing membrane investigation-----	2228	selling, tips for cash returns-----	13965
Tucson, Ariz., Municipal Airport, weather observations, hourly, decennial census-----	13118	Tung-Kuo, Shantung, collective economy of Ling-cheng commune, translation-----	672
Tucson Magnetic Observatory, magnetograms and hourly values-----	9765	Tung oil, supplies scarcest since World War II-----	8151
Tukhachevskiy, Mikhail N. last days-----	10389	Tungsten : alloys, recommended for rolling to foil-----	7627
Tularemia, USSR studies-----	19406	contracts, stockpile investigation, hearings-----	4772
Tule Lake National Wildlife Refuge : administration-----		electrodeposition in organic solvents-----	19873
hearings-----	10017	electron-beam-melted, extruding and mechanical properties, investigation-----	12857
report-----	13757		

# JANUARY-DECEMBER

	Entry		Entry
<b>Tungsten—Continued</b>		<b>Turbines—Continued</b>	
fiber-reinforced-copper-alloy or high-temperature-alloy matrix composites, alloying effects.....	19907	high rotor blade suction-surface diffusion, performance at high subsonic Mach number, investigation.....	5522
fiber-reinforced copper composites, stress-strain behavior.....	19917	hydraulic—	
forging development program.....	7597	index of hourly earnings, selected establishments.....	3780
fused-salt electrolysis, experiments.....	5481	multi-stage gas, air cooling systems, design.....	11082
Hamme district, geologic setting.....	15602	parts, stress analysis.....	5706
ion exchange X-ray spectrographic method for determining traces in cobalt and nickel.....	20965	price indexes for materials, quarterly release.....	3782
ion rocket engine using rectangular-slab porous-tungsten emitter.....	1272	steam generators industry, outlook for 1963 and review of 1962.....	5964
mechanical properties, effect of oxygen.....	9155	steam, USSR industrial development, translations.....	5353
metals, copper determination.....	16346	temperatures and coolant pressure losses for cascade of small air-cooled rotor blades.....	5528
mineral industry survey, monthly.....	4247	turboclectric space power systems, alkali metal, effect on turbine geometry.....	11047
minerals yearbook chapter.....	19882	Turbo propeller engines, <i>see</i> Engines (aircraft).	
Mo-W alloy components, ionization extent, USSR study.....	19708	Turbojet engines, <i>see</i> Engines (aircraft).	
ores and concentrates, methods for analyzing.....	3102	Turbulence:	
production, etc., 1962, preliminary report.....	5504	diurnal pattern of probability zones of increased turbulence at high altitudes, USSR study.....	985
recovery from tin smelter wastes.....	1245	relationships among coefficients of turbulent moment, heat, and matter transfer in atmosphere.....	5188
sheet, development by use of ultra-fine tungsten metal powder.....	18466	Turbulent flow, <i>see</i> Flow.	
sintered wrought, properties at very high temperatures.....	5569	Turing calculators, <i>see</i> Electronic computers.	
technical aspects, translation.....	14592	<b>Turkey:</b>	
tungsten and alloys of refractory metals, USSR experiments.....	7016	agricultural commodities, agreements..... 1553, 7442, 13084.....	20170
Tungsten carbide, cemented with titanium diboride additions.....	1235	disposition of equipment and materials, agreement.....	5741
Tungsten isotopes, radioactive, in atmosphere, USSR study.....	6762	economic developments, 1962.....	8393
Tungsten oxides, copper determination in tungstic oxide.....	16346	educational data.....	8169
Tunguska Basin, Russian SFSR, velocity and energy of Tungusk meteorite, USSR report.....	3164	Peace Corps program, agreement.....	1560
<b>Tunisia:</b>		plant quarantine import requirements.....	9552
agricultural commodities, agreements..... 1558.....	21134	United States foreign aid program, report of study.....	19055
banning of Communist Party, Soviet reaction.....	6649	who's who, biography.....	16124
investment guarantees, agreement.....	13088	<b>Turkeys:</b>	
labor conditions.....	19798	blackhead, control.....	7568
preparing shipments to.....	8418	breeder hens—	
3-year plan, economic development agreement.....	7445	1962 hatching season intentions.....	3370
United States foreign aid program, report of study.....	19055	Jan. 1, 1963.....	9452
<b>Tunnels, flood-control tunnel 10 in Fort Randall Dam, flow characteristics.....</b>	13886	farm production, etc., 1962-63.....	13091
<b>Tupes, Ernest C.:</b>		feed financing programs used by cooperatives.....	20656
correction of correlation with dichotomous variable for restriction in range.....	7623	national improvement plan—	
relationships between attendance at squadron officer school and later officer effectiveness reports.....	9626	changes, conference report, 1962.....	1658
<b>Turbine fuel, aviation fuels, petroleum products survey.....</b>	14504	distribution by States and varieties.....	12
<b>Turbines:</b>		hatcheries and dealers, participants.....	11438
air-turbo-rocket engine performance.....	5520	hatcheries, dealers, and independent flocks, participants.....	4339
Federal item identification guides for supply cataloging, supplements.....	3652	hatchery and flock participation, tables.....	1633
gas engines, spare parts for military, under contract with United Aircraft Corp., Government's loss of capability to procure competitively, GAO report.....	13997	performance tests, 1962.....	1635
gas turbines, influence of products of combustion of sulfur-containing distillates on construction materials.....	18512	provisions.....	9583
		record of performance, 1962.....	1634
		number raised, 1963 intentions, etc.....	7465
		processing plants, costs and economics.....	18434
		raised 1963, crop same as last year.....	20195
		tested by official State agencies, monthly report.....	4248
		wild, on southeastern farms and woodlands, general information.....	20285
		<b>Turkmen Soviet Socialist Republic, cotton growing, shortcomings, USSR study.....</b>	15954



# INDEX 1963

	Entry		Entry
Turner, Frederick B., influence of cratering device on close-in populations of lizards.....	11575	Tzanabaras, Mapkos I., <i>see</i> Janavaras, Mark J. (Markos J.).	
Turner, Howard L.: flight characteristics of deflected slipstream V/STOL aircraft.....	14575	<b>U</b>	
swept-wing fighter with director-type radar fire-control system and scope presentation, tracking performance.....	10971	U.A.R., <i>see</i> United Arab Republic (Egypt).	
Turner, Kenneth L., static stability characteristics of nonlifting reentry vehicles.....	18125	U.N.E.S.C.O., <i>see</i> United Nations Educational, Scientific, and Cultural Organization.	
Turner, P. M., phreatophyte activities 1962.....	18299	U.S.A.P.R.O., <i>see</i> Army Personnel Research Office.	
Turney, Jack R., State water-rights laws, etc., bibliography.....	1715	U.S.D.A., <i>see</i> Agriculture Department.	
Turnipseed, Marie, seasonal factors, consumer price index, selected series, June 1953-May 1961.....	14474	U.S. Employment Service, <i>see</i> Employment Service.	
Turnover of labor, <i>see</i> Labor turnover.		U.S. Government organization manual, 1963-64.....	13934
Turpentine, <i>see</i> Naval stores.		U.S.I.A., <i>see</i> United States Information Agency.	
Turtle Lake quadrangle, Wash., geology and mineral deposits.....	12222	U.S.S.R., <i>see</i> Union of Soviet Socialist Republics.	
Turtles, care in home aquarium.....	19232	U.S. Trade Mission to Mexico, report, 1963.....	12258
Tuzigoot National Monument, general information.....	14011	UAR, <i>see</i> United Arab Republic (Egypt).	
TV, <i>see</i> Television.		Udall, Stewart L.: addresses, etc.—	
TVA, <i>see</i> Tennessee Valley Authority.		Mar. 9, 1963.....	6575
Twelvepole Creek: engineer report—		May 6, 1963.....	10309
departmental edition.....	463	May 7, 1963.....	10310
document edition.....	252	June 20, 1963.....	17548
Twenter, F. R., geology, etc., Hualapai Indian Reservation.....	5033	June 25, 1963.....	14052
Two language, Foreign Service Institute, basic course.....	7457	July 1, 1963.....	14056
Twigg County, Ga., soil survey report.....	16566	July 8, 1963.....	14055
Twin Crags quadrangle, Idaho, geology.....	6550	July 9, 1963.....	14054
Twinting, William T., T-37C qualitative spin evaluation.....	14904	Oct. 28, 1963.....	20750
Twiss, Robert H., forest recreation research at Pacific Southwest Forest and Range Experiment Station.....	20704	Oct. 30, 1963.....	20751
2,4-D, <i>see</i> Dichlorophenoxyacetic acid.		Udell, Gilman G.: agricultural trade development and assistance act of 1954 and amendments, compilation.....	209
2,4,5-T, <i>see</i> Trichlorophenoxyacetic acid.		civil service classification and salary laws, v. 2, compilation.....	210
Two Harbors, Minn., port, harbor conditions, etc.....	10089	emergency tariff laws of 1921, etc., farm relief and agricultural adjustment acts, compilation.....	212
Two kinds of politics.....	14710	Federal farm loan act with amendments and Farm mortgage and Farm credit acts, compilation.....	213
Tynes, W. O.: horizontal construction joints in concrete.....	17414	home owners' loan acts and housing acts, compilation.....	214
influence of fine-aggregate grading on properties of concrete, laboratory investigation.....	466	laws relating to civil service retirement.....	215
Typesetting, theory and practice of composition.....	19332	laws relating to vocational education and agricultural extension work, compilation.....	216
Typewriter pads, sponge rubber, Federal standard.....	19213	radio laws of United States, compilation.....	217
Typewriter ribbons, <i>see</i> Ribbons for typewriters, etc.		supplement to compilation of veterans laws.....	218
Typewriters, current industrial reports.....	3574, 5997	UDOFIT (Universal digital operational flight trainer tool), <i>see</i> Electronic computers.	
<i>see also</i> Ribbons for typewriters, etc.		Ufa, Russian SFSR, rheumatic fever among school children.....	8966
Typhoid fever: fluorescent antibodies method for accelerated diagnosis, USSR study.....	12492	Uganda, official publications, bibliography.....	7185
symptoms, etc.....	11235	UH-1B, <i>see</i> Helicopters.	
Typists, examination announcements.....	191, 7794, 18738, 20379	Uhler, E. F., new cathode-anode couples for secondary batteries using molten salt electrolytes, investigation.....	14899
Typography, <i>see</i> Printing.		Uigur worker speaks out on Soviet-Chinese controversy.....	20843
Tyrell, Miles E.: cemented tungsten carbide with titanium diboride additions.....	1235	Uinta County, Wyo., ground-water resources and geology of Lyman-Mountain View area.....	20744
metallic binders for zirconium diboride, iron, cobalt and nickel.....	16334	Ukase of Presidium of Supreme Soviet Kazakh SSR on electoral districts for elections to Supreme Soviet Kazakh SSR, USSR.....	8714
		Ukr SSR, <i>see</i> Ukrainian Soviet Socialist Republic.	

# JANUARY-DECEMBER

	Entry		Entry
The Ukraine (Ukrainian periodical): translations	10863	Un-American Activities Committee, House—Continued	
Ukrainian Soviet Socialist Republic: Academy of Sciences—		investigations and studies, expenses, report	6135
activities	8825, 10572, 18000	publications on communism, official list	11218
reports, translations	12415	reports	6179, 7938, 15269
Technical Sciences Department, news of joint session with USSR Department	2615	Unangst, John R., effects of sweep and aspect ratio on transonic flutter characteristics of series of thin cantilever wings, etc.	5593
chemical machine building	12427	Underdeveloped areas:	
GDR students in Ukraine, article	17938	AID participant training for social and economic development of cooperating countries	12262
peats, microbiology, USSR study	20915	development, readings on science and technology	5097
Poles'ye, lowland forest area, description for tours	17888	national development through social progress, role of education	19107
social development in Sokol' Rayon	8490	papers prepared for United Nations conference—	
sugar industry, development and distribution	19597	agriculture	633
Ukrayina (periodical): translations	10863	communications	634
Ulan Bator, Mongolia, communications and telephone directory, brief instructions for using	14211	economic development, organization, planning, programming	2440
Ulan-Ude, Russian SFSR, capital of Buryatiya, general information	10881	health and nutrition	5096
Ulbricht, Walter:		human resources, training of scientific and technical personnel	2443
report to 6th SED Congress	5216	industrial development	2437
speech at East German Youth Rally, translation	19695	international cooperation	2442
terror justice, trial of Harry Seidel	5129	natural resources	5094-95
Utopidae, catalog	1649	scientific and technological policy, planning, organization	2441
Ultrasonic waves, see Sound.		social problems of development and urbanization	2439
Ultrasonics, see Sound.		transportation	2438
Ultraviolet light, see Light.		underdeveloped countries, effect on U.S. agriculture (address)	9557
Ultraviolet photodetectors	16366	Undergraduates, see Students.	
Ultraviolet rays:		Understanding brain and nervous system, research advances in neurological and sensory disorders	1338
combined with cold air, building resistance, USSR study	14120	Understanding management of congestive heart failure, outline for health agency personnel	16536
low-pressure mercury arc for calibration	21023	Underwater shock waves formed by exploding wires	18242
Ultraviolet spectrum, see Spectra.		Underwater sound, see Sound.	
Ulvedal, Frode:		Underwater Sound Reference Laboratory, research report	21658
effects of high concentrations of carbon dioxide, etc. on urinary excretion of steroids, etc.	18505	Underwear, knit, current industrial reports	3575
respiratory function, studies during exposure to simulated altitude without hypoxia	16797	Underwriting, see Mortgage Insurance.	
steroid, etc., studies on pilots during experiments in space cabin simulator	16807	Unemployed:	
Umstott, Haven D., Redi wheat, new canned cooked bulgur, market position, etc.	4359	accelerated public works program, maximum grants-in-aid for eligible areas	4430, 16815
UN, see United Nations.		area redevelopment act, forest production and industry	12243
Unalakleet, Alaska, land conveyance to Mrs. William E. Beltz	6096, 8945, 9805	assistance for workers under trade expansion act of 1962	3013
Unalaska Island, pillowed lavas	6560	community attack upon chronic unemployment (address)	14432
Un-American activities:		cooperation of Federal, State and local governments in training and employment security programs (address)	19778
Castro-Communist subversion in Western Hemisphere—		defense spending impact on labor surplus areas, report	19069
hearings	6194	dependent children, aid	3435
reports	6195, 7956	family characteristics of claimants under temporary extended compensation program, 1961-62	4832, 6354, 12084
Cuba as base for subversion in America, study	6302	Federal-State cooperation in solving problems of unemployment and poverty (address)	14433
subversion, communist party's cold war against congressional investigation, report	307	financial protection for Federal employees	16946
testimony—			
Ve-Shen Hsiang, hearings	2100		
Yuan, Frances, hearings	2100		
Un-American Activities Committee, House:			
annual report, 1961	2064		
print additional copies, reports	11860, 13770		
annual report, 1962	7938, 8012		
committee print	8012		
consultation with John Santo	8013		
hearings	306-307, 2065, 4759, 9950, 13672, 17188-189		

# INDEX 1963

	Entry		Entry
Unemployed—Continued		Unemployment Insurance—Continued	
Indians, survey, questionnaire re-		Labor Department practice of pay-	
turns -----	15316	ing benefits to former employ-	
iron-ore mine workers, Tariff Com-		ees of post exchanges and simi-	
mission report -----	14741	lar activities of Armed Forces,	
labor force—		GAO review -----	14005
meeting human problems created		labor market and employment se-	
by technological change (ad-		curity -----	3823
dress) -----	19122	statistical supplement -----	3824
monthly report -----	3921	special issues -----	3615
manpower development and train-		net receipts under Federal unem-	
ing act—		ployment tax act, 1964, esti-	
amendments of 1963—		mates -----	13464
hearings -----	17325	payments to former Federal civil-	
reports -----	17278, 18913	ian employees and ex-service-	
explanation -----	5428	men for more than one benefit	
regulations for administration—	2173	year, GAO review -----	12215
research and training activities,		programs, uneconomical practices	
report -----	7139	in administration, GAO report—	10271
manpower resources of nation,		railroad act, amend—	
training and utilization, hear-		hearings -----	18950, 19065
ings -----	17327, 19066	law -----	18779
need for better educational plan-		reports -----	17143, 19012
ning (address) -----	9026	railroad employees, temporary ex-	
neighborhoods -----	5453-57,	tended unemployment insur-	
7171-77, 9066-77, 10912-921		ance benefits act of 1961,	
political actions for meeting human		amend—	
needs (address) -----	19779	hearings -----	18950, 19065
problem (address) -----	1155	law -----	18779
statistics, meaning and measure-		reports -----	17143, 19012
ment, special report -----	4506	reduced tax rate, amend act rela-	
training—		tive to administrative expenses,	
each man has an aptitude (ad-		etc.—	
dress) -----	14435	law -----	11723
Virginia State College, program		reports -----	7971, 9869, 9989
for unskilled adults, evaluation		research exchange -----	395
(remarks) -----	14436	research for improving operations	
unemployment and employment sta-		(address) -----	19122
tistics, measuring, hearings—	13440	social administration adviser, ex-	
unemployment and labor force—	3614	amination announcement -----	11667
unemployment, estimating, hand-		State employment security agen-	
book -----	19126	cies assistance for workers un-	
unemployment problem, what we		der trade expansion act of	
can learn from European ex-		1962 -----	3013
perience (remarks) -----	9082	State laws and experience -----	13873
unemployment rates from household		State laws, significant provisions,	
survey, definitions, uses, and		Nov. 15, 1962 -----	2174
limitations -----	12813	State salary ranges of positions of	
value of prime contracts awarded		employment security, etc. -----	616,
by Federal agencies in areas of		10305, 19340	
substantial unemployment—	4274	supplemental benefit plans, digest—	16289
youth, challenge of jobless -----	9327	temporary extended unemployment	
see also Unemployment Insurance.		Insurance act of 1961—	
Unemployment, see Technological un-		amounts restoration, revise law,	
employment.—Unemployed.		report -----	20470
Unemployment compensation, see Un-		family characteristics study -----	4832,
employment Insurance.		6354, 12084	
Unemployment Insurance:		TEUC report series -----	6354, 12084
benefit series service -----	3478	unemployment compensation act of	
claims -----	4253	1938, facts for ex-servicemen—	17403
local offices, directory -----	19127	UNESCO, see United Nations Edu-	
employment, etc., of covered work-		ational, Scientific, and Cultural	
ers -----	3015	Organization.	
Employment Security Bureau practice		Unified action Armed Forces	
of concurrent payments and		(UNAAF) -----	12270, 17571
benefits to retired members		Uniform commercial code, see Com-	
of Armed Forces, GAO report—	15591	mercial law.	
employment security interviewers,		Uniform time legislation -----	12010,
analysis of appointments -----	20745	13749, 17273	
employment security review -----	3617	Uniformed services, see Armed	
exhaustees, survey, May 1961—	12084	Forces.	
Federal Government's participation,		Uniforms:	
etc., in various programs—	17406	Marine Corps regulations -----	16311
Federal tax receipts and Federal al-		Navy regulations, 1959, change—	14632
locations to States for employ-		Union, S. C., consumer expenditures	
ment security administration,		and income, 1960 -----	14460
1960-61 and 1961-62 -----	3329	Union Carbide Nuclear Company,	
former civilian employees and ex-		overpricing of K-27 tube sheet	
servicemen, Labor Dept. poli-		assemblies procured from Fair-	
cies regarding terminal leave,		banks, Morse & Co., GAO re-	
GAO review -----	10267	port -----	19284
insured unemployed, personal and			
economic characteristics (peri-			
odical) -----	3791		
issues for tomorrow -----	17406		

# JANUARY-DECEMBER

	Entry
Union of Soviet Socialist Republics:	
academies of sciences, members,	
nominations and elections,	
1962	6821
Academy of Medical Sciences, her-	
ald, translations	2590,
6794, 6994, 8511, 10643, 12682,	
16224, 17768, 20818.	
Academy of Sciences—	
activities, measures for improv-	
ing etc.	16033
affiliates, trends in scientific re-	
search in 1963	8659
anniversary meeting	17667
annual meeting	12659
articles from reports	5134
biophysics, report	865
Cytology Institute reports, ab-	
stracts	17576
Department of Chemical Sci-	
ences, general meeting	5162
dissertations, 1962, list	12574
geophysical series news, transla-	
tions	2535
herald—	
articles	12373
biology series, translations	12661
news	6680
radiobiology report	7097
Siberian Department, accom-	
plishments	15725
social sciences, recent reports	8965
Technical Sciences Department—	
news of joint session with	
Ukrainian Department	2615
technical cybernetics, news	19402
acclimatization of fresh water fish	17805
aerial photography and inland wa-	
ters, study	19465
agriculture—	
agricultural failures, French	
study	752
agricultural sciences	8887
comparison with US production,	
policies, etc.	12051
development, statements of N. S.	
Khrushchev	17838-842
planning	5218
problems, Achilles heel of Soviet	
economy	5907
problems and progress (ad-	
dresses)	20271-272
statistics	8465
trade, 1955-61	15420
translations	885,
2629, 2785, 8735, 8748, 10542,	
10857, 12429, 12442, 14319,	
17693, 17770, 19092, 19653.	
air-ionization equipment, develop-	
ment and production informa-	
tion	12636
all-Union conferences and con-	
gresses—	
atherosclerosis, problems	859
elementary particles, theory	20810
medical institutes conference on	
physical education, medical su-	
perision, and therapeutic	
physical culture	20825
photosynthesis	1816
radioelectronics use in medicine	
and biology	2467
telemetry problems	6755
rare earth elements, chemistry,	
etc.	774
rhenium	14163
surgeons, report	20922
young writers	17918
All-Union Hydrobiological Society,	
works (periodical)	8474
All-Union Microbiological Society—	
2d congress	16247
work of Moscow Dept., 1962	1114
American surplus wheat sales	18812

	Entry
Union of Soviet Socialist Republics—	
Continued	
anti-semitism, discussion by 2	
Norwegian Communists	10880
Armed Forces—	
and internationalism	15790
development as part of socialist	
state	19485
liberation of Belgrade, Oct. 1944	8859
around world with Bob Poage, re-	
port on recent trip	2046
astronomical reports	5247
atmospheric and marine research	19714
atomic energy exploitation	10775
automation—	
developments	19507
long-range prospects	14193
automobiles, buses, trailers, etc.,	
price list	15804
aviation medicine, outline on his-	
tory	10826
awards to engineers, technicians, in-	
stitutions, etc.	15740
basic capital of kolkhozes and	
sovkhozes	8454
biographical information from	
Bol'shaya Sovetskaya ent-	
sklopediya	6744
biographies from Soviet encyclo-	
pedia, 1960	2825
biology—	
and medicine, activities	7008
biological sciences—	
developments	17885
studies	10461, 12447
translations	8450
conferences	8639
decree for further development	19616
biophysics, studies	10555
blood-typing research	12587
boarding schools, educational work	5116
bonus system for creating and in-	
troducing new techniques	10402
burgeoning maritime strength,	
staff study	20612
capital of Soviet light industry	
enterprises	8712
cement plants, industrial methods	
of assembling technological	
equipment	15950
ceramics and refractories, articles	2620
challenge to U.S. machine building	7742
charge Fourth International and	
Communist Party of China	
with Trotskyism	19759
chemistry translations, nonferous	
metallurgy	5195
Chinese-Soviet zoological-botanical	
expeditions to southwest China,	
results	16231
Chu-Ilyyskiye Mountains, impreg-	
nated-streaked semimetallic	
mineralization in granites	2763
circulation of metal in national	
economy	8763
civil defense handbook	6958
clinical medicine, translations	8936
communications—	
direct link with U.S., memoran-	
dum of understanding	14734
long distance	6728
translations	691,
1084, 5331, 6708, 8463, 8578,	
9009, 10855, 12713, 16239, 17591,	
17794, 19658.	
Communist building period, role of	
scientific and engineering per-	
sonnel in raising labor pro-	
ductivity	19503
Communist ethics, Izvestiya cen-	
sures worker's economic manip-	
ulations	19632

# INDEX 1963

Entry	Entry
Union of Soviet Socialist Republics— Continued	Union of Soviet Socialist Republics— Continued
Communist outlets for distribution of propaganda in U.S., hear- ings ----- 306	economic offensive in Western Eu- rope, special study mission, re- port ----- 4749
print additional copies, reports--- 11861, 13771	economic plans for 1964-70, ade- quate foundation needed----- 12663
Communist regime from Lenin to Khrushchev, print additional copies, reports----- 11859, 13766	economic power, dimensions, hear- ings and studies----- 1971
computer technology effect on economy ----- 19439	economic system— current developments----- 19731, 20774, 20870
conditions, propaganda and truth, hearing, print additional copies, report----- 11858	structure and policy----- 888, 947, 1093, 2509, 2677, 2824, 2915, 5161, 5217, 5260, 5271, 5295, 5317, 5359, 6768, 6803, 6856, 6939, 6990, 7011, 7048, 7105, 8491, 8555, 8597, 8646, 8827, 8861, 8943, 8953, 9005, 10427, 10460, 10544, 10563, 10615, 10629, 10653, 10711, 10727, 12287, 12312, 12386, 12566, 12612, 12663, 12702, 12745, 14088, 14101, 14185, 14239, 14384, 15668, 15775, 15827, 15860, 15913, 15941, 15991, 16024, 17663, 17741, 17774, 17940, 17965, 19459, 19477, 20765, 20800, 20816, 20858
conferences, congresses, etc.— Africanists, coordination of re- search work----- 1037	problems of intra-plant plan- ning, solving----- 10711
biological aspects of cybernetics, conferences and research in earth sciences and astronomy----- 20885	education of younger generation and CPSU program----- 5119
coordinating council for protec- tion of agricultural crops, pro- ceedings and results of meet- ing ----- 1013	electric power— recent development, U.S. delega- tion tour report----- 5048
cybernetics, philosophical prob- lems ----- 6666, 6843	translations ----- 799, 1088, 2037, 2054, 5263, 6752, 8716, 10635, 12409, 12564, 15680, 17836, 19378, 20849
plastics, ideology and forest con- servation ----- 15670	electrical appliances, power con- sumption, etc----- 17919
vacuum diffusion welding----- 8677	electron devices, tabulation of data----- 12903
conquest of Arctic----- 864	electronics— broad road to industry----- 10517
construction— and building materials industry----- 2596, 6719, 8508, 10705, 10726, 12606, 15920, 16134, 16192, 19770	developments ----- 3003
organization of planning in con- struction ----- 16108	translations ----- 10380
resolutions of November plenum of CC CPSU----- 6835	ethnography, recent articles----- 12271
consumer goods and domestic trade ----- 834, 873, 910, 978, 5258, 6787, 6819, 8449, 8693, 10374, 10386, 10400, 12384, 15872, 16159, 17574, 17612, 19385, 19673	experimental surgery ----- 15736
consumer in Soviet and United States ----- 9062	experiments with plutonium-239----- 2708
cosmonauts, training, drills, etc----- 15734	export of strategic materials to USSR, hearings ----- 2099
cotton production, etc., adden- dums ----- 11465, 13187, 16762	Far East shipping, history ----- 12487
cranes and derricks----- 14142	Far East USSR, basic nonmilitary information ----- 14906
criticism of Baptists religious teach- ings ----- 17678	far north and subtropic south, ac- climatization of man----- 20773
critique of Christian, Jewish and Moslem scriptures----- 5425	fine arts education ----- 19100
Cuban military buildup— report ----- 13792	fish population, research on increas- ing and using ----- 17911
U.S. charges ----- 1513	fishery research ----- 15683
data processing research----- 17602	fishing areas, role of youth in creat- ing ----- 16232
deep-sea fishing and whaling, new treaties, etc., in international regulation ----- 7079	fishing industry— development, problems ----- 8509
design practices must be improved, de-Stalinization, West German stud- ies ----- 1011, 1134	rapid-freezing methods ----- 17755
dislocation theory studies----- 17650	foreign exchange system ----- 6909
diurnal amplitudes of air tempera- ture, atlas ----- 2510	foreign pre-diploma probationary work of students ----- 8544
drug administration, improvements needed ----- 19534	Foreign Trade Bank, establish- ment ----- 8836
earth sciences, studies and confer- ences ----- 2528	foreign trade, statistical survey, 1961 ----- 647
earthquakes ----- 1826	fuel-power balance ----- 6858
ecological studies ----- 10479	geological investigations, improving organization ----- 14141
ecology research ----- 12586	geological sciences, development, present and future ----- 7040
economic aggression in Sinkiang, Nationalist Chinese study ----- 6971	geomagnetism and aeronomy— activities, 1960-62 ----- 19579
economic geography ----- 2549	research ----- 19375
economic indices, comparison with USA, conference reports ----- 17663	geophysical and meteorological re- search, 1962 ----- 8760
economic leadership, Khrushchev's retraction of 1957 proclama- tion ----- 10763	geophysics, recent developments----- 10520



Entry

749

663

971

731,

870

888,

915,

295,

856,

105,

827,

427,

9615,

727,

566,

745,

239,

827,

991,

774,

477,

0858

0711

5119

5048

799,

8752,

5680,

17919

12903

0517

3003

10380

12271

15736

2708

2099

12487

14906

20773

19100

17911

15683

16232

8509

17755

6909

8544

8836

647

6858

14141

7040

19579

19375

8760

10520

Entry

Union of Soviet Socialist Republics—

Continued

gross national product, comparative growth rates-----	7734
health resorts-----	15788
heat and sound proofing materials, production-----	15726
helicopters, news-----	5212
higher educational institutions—catalog-----	7132
news—	
instrument building series-----	10369
radio engineering series-----	20796
radiophysics-----	10524
higher medical education, urgent problems-----	999
hydrobiology studies-----	15673
hydrobiology translations-----	16020
hydrometeorological servicing of fishing industry in Barents Sea, etc-----	795
industrial development—	
automotive industry-----	690,
2806, 2999, 6748, 8720, 8744, 8967, 10657, 12552, 12737, 14221, 14314, 15669, 15749, 15826, 16127, 16195, 19480, 19724.	
chemical industry-----	698,
919, 1072, 1076, 2477, 2672, 2848, 2978, 5198, 5262, 6684, 6799, 6886, 6933, 7039, 7052, 7082, 7106, 7116, 8473, 8551, 8770, 8881, 8899, 8940, 8973, 9004, 10511, 10552, 10611, 10648, 10815, 12297, 12408, 12423, 12452, 12521-522, 12626, 12694, 12704, 14111, 14145, 14199, 14262, 14265, 14272, 14324, 14332, 14369, 14373, 14410, 15676, 15689, 15693, 15746, 15858, 15866, 15882, 15887, 15927, 15946, 15967, 16001, 16027, 16038, 16044, 16048, 16061, 16066, 16093, 16196, 17579, 17654, 17712, 17723, 17877, 17932, 17955, 19478, 19599, 19640, 20786, 20844	
chemical machine building-----	667,
728, 763, 805, 2771, 5155, 6916, 7113, 8648, 10494, 10526, 10617, 10843, 12340, 12427, 14267, 15764, 15821, 15914, 17584, 17623, 17949, 19573, 20805	
construction machinery-----	670,
789, 860, 961, 1094, 2680, 2770, 6834, 8493, 8602, 8647, 8729, 8868, 10610, 10842, 14130, 15766, 15819, 15903, 17670, 17819, 19461, 19568.	
electrical equipment-----	750,
966, 1003, 1053, 2589, 2896, 2944, 5179, 8526, 8552, 8595, 8612, 8627, 8684, 8828, 8918, 8975, 10679, 10716, 10802, 10814, 12416, 12549, 12648, 14124, 14168, 14210, 14264, 14302, 14359, 14372, 14411, 15727, 15756, 15886, 15894, 16017, 16079, 16128, 16217, 17588, 17594, 17632, 17652, 17742, 17760, 17875, 17889, 17960, 19437, 19719.	
ferrous metallurgy-----	746,
848, 920, 1010, 2458, 2679, 2685, 2766, 2872, 2916, 2943, 5304, 5349, 6842, 7022, 7051, 7083, 8505, 8543, 8580, 8653, 8942, 10426, 10480, 10496, 10512, 10519, 10575, 10587, 10632, 10651, 10678, 10830, 12286, 12454, 12509, 12554, 12703, 12706, 12748, 14087, 14178, 14219, 14385, 15687, 15778, 15812, 15835, 15895, 15917, 15938, 15957, 15970, 16094,	

Entry

Union of Soviet Socialist Republics—

Continued

industrial development—Con.	
ferrous metallurgy—Continued	
16131, 16167, 16178, 17614, 17698, 17713, 17743, 17764, 17798, 17831, 17844, 17972, 18008, 19572, 19608, 19621, 19669, 19744, 20838.	
food processing machinery-----	7120
machinery industries-----	19684, 19721
metalworking equipment-----	838,
879, 907, 1007, 1132, 2601, 2924, 2998, 6785, 6890, 8660, 10387, 10423, 10507, 10636, 10783, 12326, 12428, 12510, 12604, 12708, 14283, 14358, 15703, 15811, 15971, 16016, 16106, 16246, 17575, 17608, 17773, 17858, 17887, 19404, 19551, 19656, 19761, 19768.	
nonferrous metallurgy-----	685,
1052, 2628, 2907, 5158, 5200, 5202, 5367, 6652, 6665, 6883, 7023, 7056, 8579, 8711, 8771, 8921, 10576, 10784, 12323, 12503, 12581, 12698, 14134, 14171, 14222, 14256, 15681, 15820, 15915, 16057, 17638, 17706, 19576, 20781.	
power machinery-----	1020,
2480, 2769, 5353, 7103, 10618, 12285, 14271, 15713, 15765, 15806, 15824, 17683, 17973, 19570.	
precision equipment-----	886,
1006, 1044, 1109, 1120, 2459, 2611, 2644, 2731, 2758, 2958, 6724, 6944, 7021, 7054, 7081, 8464, 8734, 8922, 8931, 8957, 8974, 8995, 9002, 9013, 10532, 10553, 10718, 10782, 10847, 12421, 12607, 12649, 12749, 14118, 14123, 14125, 14263, 14266, 14287, 14422, 15690, 15701, 15724, 15751, 15797, 15823, 15837, 15848, 15859, 15873, 15898, 15919, 15939, 15945, 15972, 16005, 16019, 16039, 16064, 16130, 16144, 16161, 16165, 16174, 16193, 16200, 16222, 16244, 17589, 17616, 17635, 17642, 17664, 17719, 17722, 17775, 17797, 17931, 19528, 19571, 19720	
refrigeration machinery-----	694,
892, 2633, 8968, 10561, 14388, 15704.	
regional economy-----	681,
866, 979, 1008, 1081, 2722, 2748, 2820, 2853, 2860, 3008, 6663, 6793, 6877, 8676, 8855, 8902, 10462, 10504, 12284, 12502, 12553, 12712, 12730, 14257, 14282, 14285, 14320, 15771, 15836, 15850, 15856, 15861, 15867, 15891, 15993, 16029, 16056, 16101, 16107, 16125, 16216, 16229, 17586, 17626, 17795, 17852, 17861, 17884, 17974, 19552, 19569, 19670, 19686, 19743, 20854, 20906	
tractors and agricultural machinery-----	840,
872, 902, 976, 1009, 1106, 2473, 2635, 2782, 2919, 2939, 5190, 5345, 6654, 6664, 7010, 8675, 8743, 8983, 10381, 10422, 10540, 10602, 10664, 12283, 12325, 12551, 12645, 14132, 14138, 14255, 15695, 15702, 15757, 15792, 15795, 15807, 15822, 16018, 16126, 16198, 16221, 16228, 17660, 17750, 17765, 17804, 17998, 19694, 19715, 20791, 20821, 20873, 20898	

# INDEX 1963

	Entry
Union of Soviet Socialist Republics— Continued	
industrial growth rates.....	1045
industrial management, films in system.....	2819
information storage and retrieval, developments.....	2659
institutions approved for post- graduate training, list.....	8937
international economic relations.....	20833
interplanetary rocket to Mars.....	1047
journals, abstracts pertaining to Communist China.....	17761, 17767, 19564-565
astronomy.....	987, 10765, 12361, 15995
automation.....	1032, 8919, 12547-548
biochemistry.....	733, 8738, 12545, 14084, 15796, 17975, 19554, 19566, 19600.
biology.....	687, 8447, 8723, 15796, 16076, 17975, 19523, 19539, 19554, 19600.
chemistry.....	733, 8448, 10766, 19566
electrical engineering.....	1032, 8655, 12726, 14377
electronics.....	12546, 14377
forestry.....	17977
geodesy.....	12366
geography.....	847, 8848, 12366, 12544, 14405, 15995, 17620
geology.....	753, 847, 12362, 14405, 17620
geophysics.....	12733, 17620, 17740, 17766, 17977
machine building.....	963, 8939, 12726
machinery.....	19567
mathematics.....	744, 854, 12417, 12672, 14349, 16006
mechanics.....	987, 10481
metallurgy.....	10766, 12360, 14273, 19567
mining.....	963, 10434, 17977
pharmacology.....	19600
physics.....	987, 8681, 12367, 12734
power engineering.....	1032, 8655, 12546, 14377
radio engineering.....	14377
radioelectronics.....	1032, 8919, 12547-548
soil science.....	17740
telecommunications.....	14377
Karakum Canal, main channel com- pleted, 1962.....	10791
labor—	
incentives, law.....	6867
productivity in agriculture, in- creasing, accounting, etc.....	6915
selecting by competitive methods, laws.....	5191
statistics in agriculture.....	8798
translations.....	663, 726, 740, 924, 948, 1115, 2681, 2778, 5172, 5297, 6747, 6775, 7053, 7091, 8516, 8645, 8930, 10364, 10447, 12318, 12382, 14090, 14192, 14240, 15912, 19412, 20827.
lake and river fishing, recent de- velopments.....	12372
land and marine ecology, transla- tions.....	8876
large dams of U.S.S.R.....	17191
print as Senate document, re- port.....	12765
last days of Marshal Tukhachev- sky, documentary story.....	10389
Latin American policy of Kremlin, Italian study.....	882
legal measures on personnel ad- ministration.....	5185

	Entry
Union of Soviet Socialist Republics— Continued	
Lenin Prize awards—	
1963, science and engineering.....	12446
Soviet mathematicians.....	6801
lift trucks, development and manu- facture.....	17778
light industry, technical develop- ments.....	19456
literature in post-Stalin era.....	10366
livestock production.....	8542
machine building—	
hot pressing technology.....	6865
specialization and automation.....	7130
magnetic anomalies, map, compil- ing problems.....	1087
Main Geophysical Observatory Imeni A. I. Voyeykov, report.....	10397
malignant neoplasms, disease and death rate of population.....	830
medical and biological institutions, activities.....	17799
medical care—	
medication, new, determining vol- ume of production.....	19638
organization of treatment for in- juries.....	5194
treatment for all on dispensary level.....	17944
medical encyclopedia, selections.....	5168
medical industry, small-scale pro- duction units.....	17577
medical radiology—	
personnel, training.....	852
studies.....	19516
medical sciences.....	2707
milestones in development.....	2638
medicine and public health.....	2639, 12306
medicine, problems.....	12465
mercury poisoning, research in toxic- ology.....	15984
metallurgy—	
and dislocations, reports.....	10570
developments.....	10571
Soviet reports, Nov.-Dec. 1962.....	10518
meteorology and hydrology re- search.....	17724
meteorology, recent developments.....	19544
microrays development.....	8857
military construction units, prog- ress.....	12530
military history, questions in book, Military strategy.....	15791
military law foundations.....	14216
military science, methods of re- search.....	10417
military translations.....	19419, 20857
border troops.....	874, 19407
civil defense, materials on.....	6872, 10415, 12616-617, 17751
doctrine and training.....	1025, 8470, 17784
doctrine, training, cybernetics.....	10418
DOSAAF—	
activities, etc.....	764
Congress.....	680
materials on.....	679
ground troops, materials on.....	1017
KGB anniversary.....	7123
militia, materials.....	5130
Navy, materials on.....	12614
PVO troops, materials on.....	1017, 12615
rocket troops, materials on.....	1017, 6927
mineral-fuels industries, 1928-58, statistical survey.....	6006
Miskhor, Koreiz, Gaspra Health Resort, guide.....	12488
missile bases in Cuba, President Kennedy's report on protect- ing the peace (address).....	1577
national economy—	
questions of planning at contem- porary stage.....	8718
use of material balances.....	7119

	Entry
Union of Soviet Socialist Republics—	
Continued	
natural resources, protection	16049
new achievements in chemistry	897
newspapers in Library of Congress	5465
north, transportation and industrial development	678
northwest, geographic characteristics, etc., Air Force pamphlet	4387
novelist describes kolkhoz life	10488
nutrition studies	19473
oceanographic and submarine studies	19464
oceanography developments	19580
oil refineries, problems of development and location	19482
oncology, recent aspects	8808
Pacific Ocean fishing industry, plenums, research	10658
peaceful coexistence—	
and Socialist unity, comments	6973
statements, international Communist developments	8487
pipe production	14105
planned expenditures for research institutions	5157
planning of public funds of national consumption	767
plastics industry development	14121
political agreements and results, staff study, supplement	17319
political base, further democratization	831
powder metallurgy—	
abstracts	8541
developments	15911
rhodium in	5404
Soviet studies	5373
production figures, 1980	2487
psychological reports	3002
public health, translations from Sovetskoye zdavookhraneniye	6043
railroads—	
and trains	12410
calendar-handbook for workers, 1962-63	10630
Moscow-Caucasus guide	15847
Moscow-Chop guide	12402
Moscow-Crimea guide	10824
Moscow-Vladivostok guide	12441
rare metal industry research	6721
relationship between national income and State budget	12313
religion, translations	1105
5236, 5336, 8573, 8903, 10375, 12042, 16149	
report of U.S. technical study group	11465, 13187, 16762
research and design contracts	16183
research in marine biocenosis	15961
research on kinetics of catalytic reactions	16873
Russian-Chinese machine translation systems, comparison of old and new programs	8691
satellite tracking equipment	6853
science—	
activities	5259
activities and personalities	17581
journals, available in English	7423
present tasks confronting problems and achievements, translations	5269
progress, reflections	10721
science and agriculture	17629
scientific and medical activities, recent	2595
scientific and medical education in 1962, developments	19607
scientific and technical research achievements under Communism, public inspection of plan fulfillment	5399
	5281

	Entry
Union of Soviet Socialist Republics—	
Continued	
science—Continued	
scientific and technical serial publications, list, 1945-60	19813
scientific and technical terms, selective list	12816
scientific abstracts—	
biology and medicine	14280, 15814, 17587, 17933
chemistry and metallurgy	17611, 17947, 19629
electronics and engineering	14106, 15949, 17808-9, 19682
physics and mathematics	12767, 15672, 19683
scientific Communism course, basic principles	2711
scientific research—	
coordination, new form in economics	19637
hard alloys	8996
planning, financing, and utilization	10779
scientific-technical progress and regeneration of technical engineering cadres	10408
scientific-technical societies, role—	19697
scientists—	
biographies	788, 2930, 8949, 10652, 16069, 17812
information	17659
sightseeing tours in Leningrad region and quick trips to northern Russian cities	957
Sino-Soviet bloc, United States trade, 1961-62	17559
Sino-Soviet dispute	4435
effect on Albania	6962
French CP documents	6851
Italian press articles	16260
key issues	11529
Uigur worker speaks out	20843
Sino-Soviet talks on Communist China's basic viewpoints and attitudes	19454
social and cultural institutions, prevention of inefficient expenditures	12425
soil conductivity of territory	19730
southeastern, topographer's travel notes	5184
southwest, geographic characteristics, etc., Air Force pamphlet	55
Soviet comments on socialist solidarity and national liberation	7064
Soviet technical press, current review (periodical)	3576
Soviet Union and right of self-determination	16175
space embryology studies	8948
space medicine and biology—	
reports	10686
studies	8897
staffing procedures and problems, study	13808
print additional copies, report	15304
standardization of home refrigerators	10561
state and collective farms, material incentives system	2468
steel industry, oxygen converter steelmaking process, problem of efficiency	946
struggle against stubborn writers	12437
supervision needed for using funds to acquire equipment	16104
surgery, translations from Kuvodstvo po khirurgii	12368
teaching in social sciences and humanities	15451
teaching of physics, report for UNESCO	12656

# INDEX 1963

Entry	Entry
Union of Soviet Socialist Republics—	Unit heaters:
Continued	current industrial reports..... 3575
technical aid to foreign countries	1962, summary..... 7754
in development of medical industry	Unit planning and teaching in elementary social studies..... 13871
19727, 20826	Unitarian Women, Alliance of, <i>see</i>
technical designers, obstacles facing	Alliance of Unitarian Women.
721	United Airlines, Inc., accident..... 7773
territorial-administrative changes	United Arab Republic (Egypt):
6995, 12524, 16249	agricultural commodities, agreement
topographic maps, demand and use	9405
in national economy..... 12411	economy, basic data..... 12253
toponymics studies..... 6823	education exchange program, financing, agreement..... 21120
trade while building a Communist society	educational data..... 8170
861	import tariff system..... 2390
training programs for Africa..... 6345	investment guarantees, agreement..... 16605
transport machine building, determination of unit cost of output	sending gift packages to..... 2417
15840	Sudan boundary, study..... 20163
transportation	trade, agreement relating to GATT..... 11326
684,	United States foreign aid program, report of study..... 19055
765-766, 843, 1148, 2493, 2501,	visas, abolition of fees, agreement..... 20184
2562, 2870, 6651, 7084, 8815,	United Daughters of the Confederacy, design patent, extend..... 13526
8958, 10674, 10706, 10861, 10875,	United Federation of Postal Clerks, AFL-CIO, agreement with
12591, 14166, 14252, 14351,	Post Office Department..... 9324
16172, 17821, 17843, 19410,	United Kingdom of Great Britain and Northern Ireland, <i>see</i> Great Britain.
19586.	United Nations:
sea..... 2830	action agency for peace and progress..... 18328
Transvolga area, irrigation, development, questions..... 2470	activities in North Borneo..... 19615
trawler traffic in U.S. territorial waters—	conference on law of the sea, convention on high seas, adopted..... 5728
hearings..... 15302	fight for freedom (address)..... 9403
report..... 18929	financial situation, 1962, semiannual report..... 19051
treaty violations, record of broken promises..... 7657	Food and Agriculture Organization—
tuberculosis control, stages in development..... 993	constitution, amendments and text..... 5739
turnover funds of enterprises, analysis..... 19734	20th anniversary dinner commemorating founding (address)..... 14711
underwater fishery research..... 8860	General Assembly, 17th session—
underwater geology studies..... 14310	general accomplishments (statement)..... 9399
underwater research, data..... 19736	report..... 6296
Union of Soviet Socialist Republics and Red China, State Department briefing..... 9398	international cooperation and problems of transfer and adaptation..... 2442
United States-Russia convention line of 1867, study..... 20159	member nations, political rights of women..... 3407
urban medical districts, problems of organization, etc., translation..... 17935	new materials useful in teaching, bibliography..... 4813
use of tetracycline antibiotics in experimental radiation sickness..... 19491	Special Fund, Cuban project, hearings..... 6297
veterinarians, conferences..... 5392	technical cooperation programs..... 20169
vigilantly stand guard over the peace..... 10828	United States and United Nations..... 1790
VINITI (All-Union Institute of Scientific and Technical Information), review of 10 years activities..... 12572	United States interest, reappraisal..... 1791
wages—	United States participation—
piece-rate and premium systems..... 2533	amend act..... 11898
supplemental, on experimental-demonstration farms..... 2531	hearing..... 13599
Wallenberg affair unsettled..... 16176	report..... 8108
water supply improvements and methods of furthering improvements..... 2566	review, hearing..... 3342
welding, prospects for development..... 16056	you and United Nations, questions and answers..... 3342
workers, improving scientific-technical and cultural levels..... 20846	United Nations Conference on Application of Science and Technology for Benefit of Less Developed Areas:
works on corrosion and protection of materials, bibliographic index..... 10640	readings on development, list..... 5097
World War II—	United States papers..... 633-634, 2437-43, 5094-96
history of war, 1941-45, USSR review..... 20815	United Nations Educational, Scientific and Cultural Organization:
operations, translations..... 8640	activities and procedures, hearing..... 6294
war (military) economy, 1941-45..... 17643	American interest in UNESCO..... 20191
Union wages, <i>see</i> Wages.	basic documents..... 7436
Unions, <i>see</i> Fishermen's and fish shore workers' unions—Labor unions—White collar unions.	

# JANUARY-DECEMBER

Entry	Entry
United Nations Educational—Con. newsletter ----- 4252	United States National Commission for UNESCO: ----- 4252
teaching of physics in USSR, re- port for UNESCO ----- 12656	UNESCO in news ----- 5744
UNESCO in news ----- 5744	United States Park Police, <i>see</i> Police.
United Spanish War Veterans, con- vention, 1962, proceedings ----- 11759	United States-Puerto Rico Commis- sion on Status of Puerto Rico:
United States:	establish—
NOTE:—For all subjects pertaining to the United States, except its govern- ment, general history, and description, <i>see</i> such subjects.	hearings ----- 13654
America illustrated (periodical)—	reports ----- 18885, 20469
Polish language ----- 3452	United States Study Commission—
Russian language ----- 3453	Texas, audit, Aug. 28, 1958—
American studies, USIA reading list ----- 18357	Aug. 28, 1962 ----- 6531
Constitution and Government, Fed- eral textbook ----- 621, 15630, 17543	United States Travel Service:
flight information publication, plan- ning -----	increasing incoming tourist trade by promotion campaigns (ex- cerpts from statement) ----- 11366
air traffic control procedures ----- 3704	press releases ----- 4100
planning data ----- 3700	report, Oct. 1962-Mar. 1963 ----- 11367
Government, our American Govern- ment, questions and answers, re- print as Senate document, re- ports ----- 6278, 7930	UNIVAC, <i>see</i> Electronic computers.
history of public lands, brief sketch ----- 10924	Universal digital operational flight trainer tool, <i>see</i> Electronic computers.
interest in United Nations, reap- praisal ----- 1791	Universal military training and serv- ice act, <i>see</i> Military service.
Russia convention line of 1867, study ----- 20159	Universal Postal Union, accomplish- ments (remarks) ----- 21072
splendors and heritage, publications list ----- 11227	Universalist Women, Association of, <i>see</i> Association of Universalist Women.
state of the Union address by Presi- dent Kennedy ----- 2023	Universe:
statistical abstract, 1963—	microbes and the cosmos, USSR study ----- 931
departmental edition ----- 16905	peaceful use, Yugoslav order estab- lishing commission ----- 10655
document edition ----- 17068	Universities, <i>see</i> Colleges and uni- versities.
United States and United Nations ----- 1790	University of Michigan, scientific and engineering research proposals, case study of support ----- 19984
wall map, print, reports ----- 7931, 8082	University of Tennessee, Agricultural Research Laboratory, research progress reports ----- 7706, 16851
United States Antarctic Research Program, general information ----- 14617	Unlading and lading:
United States Capitol Historical So- ciety, House of Representatives in session, grant permission to take color photograph, report ----- 20477	aerial unloading kit modification, KMU-154/E ----- 18457
United States coast pilots, <i>see</i> Coast pilots.	fresh fruit and vegetables, un- loads—
United States code, <i>see</i> Codes of law.	eastern cities ----- 5784
United States Educational Founda- tion in Philippines, agreement ----- 13081	7531, 14817, 20258
United States Educational Founda- tion in Thailand, agreement ----- 14732	midwestern cities ----- 5786
United States Employment Service, <i>see</i> Employment Service.	9527, 14819, 20260
United States import duties anno- tated ----- 11641	100 cities, 1962 ----- 5728
United States Information Agency:	southern cities ----- 5787
activities in Africa, hearing ----- 7996	7532, 14820, 18377
appropriations, 1964—	5785,
hearings ----- 11874	9526, 14818, 20259
report ----- 11848	livestock trucking, safety-checking ----- 8206
budget, 1964, decrease ----- 7867	mariner-class ship, loading ----- 7362
facts about USIA ----- 11364, 14763	steel products, recommendation of trade, amendment ----- 4557, 13267
field staff, Foreign Service list ----- 1510, 3340	unloading grain faster from trucks with complete opening end- gate ----- 7570
focus on Berlin, USIA in action ----- 11365	Unloading, <i>see</i> Unlading and lading.
general information ----- 1578	Unloads, <i>see</i> Unlading and lading.
magazine reprint MR series ----- 3880	Unscreening of images for optimum visual information ----- 1063
press releases ----- 4099	Untermeyer, Louis, Edward Arlington Robinson, reappraisal ----- 9088
report, semiannual ----- 20219	Upland cotton, <i>see</i> Cotton.
review of operations, July 1-Dec. 31, 1962 ----- 9472	Upper air, <i>see</i> Atmosphere.
special lists ----- 18357	Upper atmosphere, <i>see</i> Atmosphere.
United States Military Advisory Group to Republic of Korea, KMAF in peace and war, history ----- 5468	Upper Klamath National Wildlife Refuge:
	administration—
	hearings ----- 10017
	report ----- 13757
	Upper mantle project, <i>see</i> Earth.
	Upper Mississippi River Wildlife and Fish Refuge:
	general information ----- 13969
	waterfowl utilization and hunting kill, 1946-60 ----- 15537

Do not order from index; see indicated entry

Page 631



# INDEX 1963

Entry	Entry
Upper Rock Creek Watershed, proposal (remarks)-----	42
Upper Volta:	
import tariff system-----	2393
investment law-----	15649
Upswing in rural America-----	11469
Uptake of radiolotopes by some aquatic insects, USSR-----	12513
Uptrend in workers' education-----	20938
Urani, Josephine M., legal status of women, Georgia-----	20253
Uranium:	
after 1966 (remarks)-----	11594
beta treatment, summary report-----	18583
catalysts for destruction of air pollutants in automobile exhaust, development-----	4490
contributions to geology of uranium (series)-----	19296
depleted, use in-----	
bearing metals and low-alloy steels-----	137
cathodic protection-----	18101
deposits-----	
buried channels in Monument Valley area, Arizona and Utah-----	597
carbonate rocks-----	17529
distribution of elements in Colorado Plateau, preliminary report-----	15605
Strawberry Hill quadrangle, Wyo-----	2340
electrowinning molten uranium metal from uranium oxide, technical feasibility-----	10959
geology and uranium deposits of southern Black Hills (series)-----	6544, 10275, 12219, 20727
industry and its potential market (remarks)-----	4501
ionium-uranium ratios of carbonate rocks, Eniwetok Atoll-----	19308
Lehigh, Pa., quadrangle-----	19293
milling industry, waste guide-----	9350
mills, process and waste characteristics-----	9351
minerals, evaluating discordant lead-isotope ages-----	5022
minerals yearbook chapter-----	18112
mining practices at four properties in Gas Hills, Wyo-----	9112
ores, Deer Flat area, Utah-----	12223
plutonium-uranium fuel elements, separation and determination of plutonium by cation exchange-----	5939
possibilities, Pucallpa region, Loreto Department, Peru-----	14998
reconnaissance-----	
Cuzco-Anta area, Peru-----	11581
Iquitos area, Peru-----	14999
Peruvian coast-----	14997
San Pedro de Atacama and Laco areas, Chile-----	16855
Sayapullo Mine area, Peru-----	16854
recovery, metallic reactions-----	4484
resin-in-pulp-type milling flowsheet, disposal of liquid waste-----	3075
selenium in oxidized sandstone-type deposits-----	6552
thorium-uranium base alloys, high-strength ternary and quaternary development-----	5922
vanadium deposits of Monument Valley area, Ariz-----	12220
water-moderated arrays of uranium and stainless steel, ANPP code development program-----	126
X-ray preferred orientation meeting, papers-----	16850
Uranium carbide:	
fast reactor fuel, study of PuC-UC-----	1829
nuclear fuel, development-----	15017
preparation of (Th,U)C <sub>2</sub> fuel particles for HTGR-----	14961
Uranium dioxide:	
characterization, papers presented at meeting-----	1838
fast reactor fuel, study of PuO <sub>2</sub> -UO <sub>2</sub> -----	1829
fuel elements, powder packed, symposium-----	5925-26
irradiation-----	
behavior of BeO-UO <sub>2</sub> fuel as function of fuel-particle size-----	14970
transient effects in fast reactor fuels-----	14982
molten, compatibility with 5 refractory materials-----	5572
oxidation, USSR study-----	5285
Uranium isotopes, U-235, calculating outputs and charges-----	15010
Uranium oxides:	
electrowinning molten uranium metal from uranium oxide, technical feasibility-----	10959
reduction, phase transformations, problems, USSR study-----	12414
Urbach, Frederick, Conference on Biology of Cutaneous Cancer, Apr. 6-11, 1962, proceedings-----	7315
Urban areas, see Cities and towns.	
Urban life, see Cities and towns.	
Urban planners, see City planners.	
Urban planning, see Redevelopment (city planning, etc.).	
Urban renewal, see Redevelopment (city planning, etc.).	
Urban Renewal Administration:	
improper inclusion of Melan Bridge costs in Keyway slum clearance and urban renewal project, Topeka, Kans., GAO report-----	20716
news releases-----	4101
premature approval of large scale demolition of Erieview urban renewal project I, Cleveland, Ohio, GAO report-----	14002
technical guides-----	1579, 11370, 18358
Urban renewal manual-----	4270
Urbana, Ill., consumer expenditures and income, 1960-----	12790, 14459
Urinary organs, intestinal transplants incorporated in bladder, physiological and histochemical study of adaptation, USSR-----	5235
Urine:	
analysis, detection of in-flight hyperventilation-----	5891
beryllium determination by ion exchange separation and fluorimetric measurement-----	14984
excretion of steroids and catecholamines, effects on high concentrations of carbon dioxide and diet-----	18505
titratable acidity and ammonia excretion during hypothermia-----	13215
Ursic, Stanley J., planting lobolly pine for erosion control in north Mississippi-----	20710
Uruguay:	
gas appliances, household and commercial U.S. market in-----	20339
livestock and meat industry-----	15544
USAAA, see Army Audit Agency.	
USAF Experimental Flight Test Pilot School, history, Feb. 4, 1951-Oct. 12, 1961-----	7610
USAFI, see Armed Forces Institute.	
USAPRO, see Army Personnel Research Office.	
USARP, see United States Antarctic Research Program.	
USDA, see Agriculture Department.	
Useful information about working for Uncle Sam-----	11228

# JANUARY-DECEMBER

	Entry		Entry
Useller, James W., combined compressor coolant injection and afterburning for turbojet thrust augmentation	5513	Utter, Stephen, determination of stresses around underground opening, Climax Molybdenum Mine, Colo.	3094
USIA, see United States Information Agency.		Uzbek biological journal (USSR periodical):	
USIDA series	7766	translations	15738
USL reports	11263	Uzbek Soviet Socialist Republic: economy and culture in 5th year of 7-year plan	12702
Uspekhi sovremennoy biologii (periodical):		research activities of zoologists	1112
translations	772	transportation, translation	5215
USRL, see Underwater Sound Reference Laboratory.		ukase on—	
USSR, see Union of Soviet Socialist Republics.		consolidation of rayons	8529
Usury and interest, home mortgage interest rates and terms	10148	election districts	8629
Utah:		Uzbekistan, see Uzbek Soviet Socialist Republic.	
annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4571	Uzbekskiy biologicheskiy zhurnal (periodical):	
beryllium ore, recovery by fluosilicate process	5483	translations	15738
Cache Valley, southern, geology	2345		
climatological data	3517		
county business patterns, activities covered by OASDI program	15054, 18677, 13922		
electric rate book	13922		
eligibility of public lands for selection as indemnity for lost school lands, opinion of Attorney General	9020		
5B redevelopment area, statistical profiles	11693, 13362		
La Sal Mountains area, regional geophysical investigations	2346		
Middle Canyon of Oquirrh Mountains, hydrogeology	19324		
mineral industry, minerals year-book chapter	3068		
national forests, pest control progress 1961	10230		
population, 1960, characteristics	13278		
precipitation data, hourly	3771		
public school finance program, 1962-63	13860		
SBA financial assistance	1467		
Utah Valley, southern, geology	5019		
water supply outlook and snow surveys	4290		
weather stations, decadal census	16686		
western, hydrology of stock-water development on public domain	6561		
zinc deposits—			
oxidized	14017		
supergene detailed study	14017		
ZIP code directory	20069		
Utah Valley, southern, geology	5019		
Ute Indians:			
Southern Ute Tribe, land exchange—			
law	17042		
reports	13594, 17261		
Ute Mountain Tribe rights and interests in and to land in New Mexico, determine, report	19039		
Ute Mountain Tribe of Ute Mountain Reservation, see Ute Indians.			
Uterus, cancer	20099		
Utica, N.Y., water resources of area	5030		
Utilities, see Public utilities.			
Utility companies, see Electric utilities—Public utilities.			
Utility man, 3 & 2, Navy training course	16459		
Utility trucks, M151, costs incurred because of delay of Army in equipping for airborne operations, GAO report	12217		
Utter, Kenneth L., New York City wholesale butter, etc., market facilities	1701		

## V

V.A. see Veterans Administration.	
V.E.S., see Veterans Employment Service.	
VA, see Veterans Administration.	
Vacation pay, see Wages.	
Vacations, business in New Hampshire	1485
Vaccination, information for international travel	21087
Vaccine, measles vaccines, status, technical report	9355
see also Influenza vaccine.	
Vacuum:	
cladding of refractory metals, USSR study	19546
coatings, deposition by means of electron bombardment	18180
diffusion welding, USSR scientific-technical conference summary	8677
effect on penetration characteristics of projectiles into fine particles	3140
evaporated thin films research	7646
insulation, materials investigation up to 4000° F	11472
plastics weight loss rates at temperatures from 80° to 500° F	1273
sublimation effect of radiant heat component on heat transfer	18179
super-high via semiconductors, USSR study	6641
thermal-vacuum testing earth satellites	16372
Vacuum arc melting and casting of copper	14519
Vacuum cooling, see Cooling.	
Vacuum gages, thermal conductivity, calibration in range of 10 <sup>-4</sup> to 1 Torr lower limits	12865
Vacuum systems:	
pneumatic process for filling large dry chemical fire extinguishers	18253
technology and practice, literature review	9599
Vacuum ultraviolet photolionization detector	7288
Vakhsh River and Valley, hydroelectric stations, installation, USSR study	5333
Valdez, Luisa G., relief	11929
Valle Grande, Sandoval County, N. Mex., geology and hydrology	19325
Valle Grande National Park, establish, hearing	2096
Valle Toledo, Sandoval County, N. Mex., geology and hydrology	19325
Vallecitos boiling water reactor, see Reactors (atomic).	
Valley, James L., mineral industry of Georgia	20955

# INDEX 1963

	Entry		Entry
Valley of opportunity, TVA-----	7477	Vapor pressure:	
Valuation, test appraisals (address)-----	6403	arsenic (III) oxide, metal dia-	
Valuation decisions, <i>see</i> Interstate		phragm apparatus for measur-	
Commerce Commission.		ing-----	9136
Value engineering handbook-----	10039	metal halides, references with bibli-	
Valves:		ography-----	7206
duct closure for hot cycle rotor		Vaporization:	
system-----	14751	compounds and alloys at high tem-	
Federal item identification guides		peratures-----	9638
for supply cataloging, supple-		sodium facility, design, etc-----	11041
ments-----	3655	Vapors, cesium, compatibility with	
Vanadates, <i>see</i> Magnesium vanadates.		selected materials at tempera-	
Vanadium:		tures to 1200° F-----	16369
electrodeposition in organic solv-		<i>see also</i> Water vapor.	
ents-----	19873	Vargo, Donald J., effects of secondary-	
high-purity, analysis by optical		air flow on annular base force	
emission spectrography-----	7218	of supersonic airplane-----	5515
high-vanadium oil-ash deposits in		Variability (psychology):	
naval boilers, chemistry-----	11182	factor analysis functions in statisti-	
mineral industry survey, monthly-		cal analysis of multiple time	
minerals yearbook chapter-----	14527	series-----	4419
uranium-vanadium deposits of Mon-		Varian Associates, Palo Alto, Calif.,	
ument Valley area, Ariz-----	12220	catalog prices charged for kly-	
Vanadium carbide, heats and free		stron tubes under noncom-	
energies of formation-----	7214	petitive procurements negoti-	
Vanadium nitride, heats and free en-		ated with military departments	
ergies of formation-----	7214	and contractors, GAO examina-	
Vanadium oxides, bomb reduction,		tion-----	2322
modifications-----	18100	Variance analysis, effects on judgment	
Vanadium silicide, high-temperature		of variations in job rating	
heat-content and entropy data-----	12837	scale format-----	7626
Van Allen radiation belts:		Variation (biology):	
energetic particles-----	16373	Chlorella mutations, USSR studies-----	16243
high-energy electrons, origin, etc-----	21024	Variational approach to calculation	
magnetic field-----	12873	of charge exchange cross sec-	
outer, energy spectrum of electrons-----	7269	tions for adiabatic collisions-----	12853
Van Arsdel, E. P.:		Variational method for optimization	
simple weather instrument shelter		of interplanetary round-trip	
for plant disease investiga-		trajectories-----	7279
tions-----	15565	Varnes, David J., geology and ore de-	
some forest overstory effects on		posits of South Silverton min-	
microclimate and related white		ing area, Colo-----	8337
pine blister rust spread-----	577	Varnish and varnishing:	
Vanasek, Frank J., importance of situ-		current industrial reports-----	3574, 9718
ational factors in measure-		Federal test method standard-----	8263
ment of officer effectiveness-----	66	Vascular system, <i>see</i> Blood vessels.	
Van Campen, Wilvan G., progress in		Vatakis, Marika N., <i>see</i> Cavaris,	
1961-62, Biological Labora-		Marla.	
tory, Honolulu, Hawaii-----	15518	Vatican, 2d Ecumenical Council,	
Vance Mill Jct., Pa., railroad acci-		viewed by Ukrainian Catholic	
dent-----	638	of Eastern Church-----	17916, 20760
Vandalla, Ill., railroad accident-----	10357	Vaughan, D. A.:	
Vanderbeck, R. W., mechanical prop-		arctic survival rations, liver con-	
erties of high-manganese semi-		stituents in rats fed pemmican-----	11499
killed steel plate-----	9379	high fat diet effect on thiamine ex-	
Vandiver, Frank E., John J. Pershing		cretion, etc-----	1761
and anatomy of leadership-----	13194	post cold behavior of riboflavin de-	
Van Dolah, Robert W., review of fire		ficient rats-----	1760
and explosion hazards of flight		Vaughan, James A.:	
vehicle combustibles-----	5470	coal, Pennsylvania anthracite-----	19827
VanDress, Michael G., estimated num-		distribution of Pennsylvania an-	
ber of days' supply of food and		thracite for coal year-----	
beverages in retail stores,		Apr. 1, 1961-Mar. 31, 1962-----	3052
1962-----	1708	Apr. 1, 1962-Mar. 31, 1963-----	20945
Van Engel, W. A., blue crab and its		Vaughan, Victor L., jr., self-erecting	
fishery in Chesapeake Bay, pt.		flexible foam structures for	
2, types of gear, etc-----	4945	space antennas-----	7267
Van Hoboken, Anthony, lecture, May		Vaughan, W. J., underwater shock	
18, 1962-----	1190	waves formed by exploding	
Vanillin, technical, from Canada, de-		wires-----	18242
termination of no injury or		Vaux, Walter G., interchange of	
likelihood thereof to U.S. in-		stream and intragravel water	
dustry-----	9459	in salmon spawning riffle-----	4960
Vanlier, Kenneth E., ground-water re-		VBWR, <i>see</i> Reactors (atomic).	
sources of Alma area, Mich-----	20741	VCS, <i>see</i> Veterans Canteen Service.	
Van Olphen, Barbara R., relief-----	15203,	Veal, calf-pooling, improved market-	
	20561	ing through grading and comm-	
Van Oosten, John, surface currents of		mingling-----	16747
Lake Michigan-----	10199	Vectorcardiograms:	
Vanpée, Marcel, ignition of combus-		observations in adolescence and	
tible mixtures by laminar jets		adulthood of influence of high	
of hot gases-----	19865	altitudes on heart-----	71
Vapor-liquid equilibria for helium-		significance in investigation of mi-	
nitrogen-methane system-----	7215	tral lesions of heart, USSR	
		study-----	2968

	Entry		Entry
Vectorcardioscopy, USSR handbook...	10731	Vegetables—Continued	
Vedder, J. G., geology of San Nicolaa Island, Calif.-----	14021	vacuum precooling, comparison---	9582
Vegetables:		vegetable situation-----	4276
canning industry, outlook for 1963 and review of 1962-----	4514	western, marketing, long-term outlook	10051
carlot conversion factors, table, supp-----	1619	wholesale market, organization---	
commercial, fresh market and processing, planting and harvesting dates, etc.-----	14853	Miami, Fla-----	7574
commercial processing acreage marketing guides-----	5781	St. Petersburg, Fla-----	7574
commercial production for fresh market and processing, 1959-62-----	9451	Tampa, Fla-----	7574
commercial reports, 1963, release dates, announcement-----	9441	see also names of vegetables.	
culture, etc., publications, price list-----	11223	Vegetation:	
fair trading in industry, under perishable agricultural commodities act-----	18382	and relief, relationship, Hungary-----	17830
Florida, marketing, 1962 summary-----	18385	close-in effects of underground nuclear detonation-----	11577
foreign trade prospects-----	2306	evapotranspiration, Blaney-Criddle method for estimating, analysis and simplification-----	17488
fresh-----		range information, automatic data processing-----	6497
foreign agriculture circulars-----	3720	Thailand, ground mobility-----	13888
fresh market, acreage and estimated production, monthly report-----	4277	Veghte, James H.:	
fresh market, acreage, production, etc., annual summary-----	3371	evaluation of KC-135 and U-2 bailout survival kit-----	14913
market news, weekly summary-----	3741	partial cold water immersion on man in Arctic, effects-----	18483
prices, 1962-----	11466	simulated survival trek from confluence of Anaktuvuk and Colville Rivers to Arctic Coast-----	11504
shipments by commodities, etc., 1962-----	13136	static electricity accumulation on arctic clothing-----	14912
shipments, by States, commodities, etc., 1962-----	9525	Vehicles:	
unloads-----		Army combat, unnecessary deterioration of unused rubber tracks, GAO review-----	6540
eastern cities by commodities, States, and months-----	5784, 7531, 14817, 20258	children's, industry, outlook for 1963 and review of 1962-----	4529
in 100 cities, 1962-----	7528	combat, and equipment in 3d Marine Division (reinforced) Okinawa, Marine Corps, Navy Dept., unsatisfactory condition, GAO report-----	20725
midwestern cities, by commodities, States, and months-----	5786, 9527, 14819, 20260	equipment components, Federal item identification guides for supply cataloging, supplements-----	3652
reporting, seasonal movement guides-----	1618	mechanically powered, hoisting, safety data for stevedoring-----	14449
southern cities, by commodities, States and months-----	5787, 7532, 14820, 18377	noncombat, maintenance costs and manpower in Defense Dept., GAO review-----	589
western cities by commodities, States, and months-----	5785, 9526, 14818, 20259	recovery operations-----	101
frozen, economic inquiry into marketing-----	13944	see also Aircraft—Airplanes—Motor vehicles—Spacecraft.	
insects and diseases in home garden-----	11452	Vehicular measurements of effective runway friction-----	9456
market news service-----	11425	Veins, see Blood vessels.	
marketing facilities of San Francisco-----	20281	Velocity:	
processed-----		aborts from midcourse region of lunar mission, prediction of requirements-----	11039
and related products, regulations governing inspection and certification-----	13153	aerodynamic characteristics of full-scale propeller tested with rigid, flapping blades, and cyclic pitch control-----	11054
inspection, Agriculture Department services-----	7537	hypervelocity, impact ionization effect-----	18165
plants under USDA continuous inspection, list-----	7530, 13137	low density plasma flows, direct measurements-----	11060
standards for grades-----	16703	sound in petroleum reservoir rocks and other mediums, bibliography-----	7205
processing-----		terminal velocities of small fruits-----	20264
acreage, yield, production, etc., 1951-60, cucumbers for pickles-----	45	time-dependent air forces on wings with supersonic leading and trailing edges and subsonic side edges applicable to wing deforming harmonically according to general polynomial equation-----	3135
Southeastern industry, marketing practices, etc., 1960-----	5829	USSR study-----	15979
statistical report-----	4278	vertical wind component, sonic anemometer for measuring-----	9616
annual summary, 1962-----	3372	wind, structure in ground surface layer, USSR study-----	19445
spring, acreage marketing guides-----	2		
summer and fall, acreage marketing guides-----	5780		
Texas, truck-rail and sea-land shipping tests-----	5832		
winter, acreage marketing guides-----	14814		

# INDEX 1963

	Entry		Entry
Velveteen, Italian exports of cotton fabrics, trade agreement.....	1554	Venue:	
Vending machines:		civil actions on tort claims in District Courts, reports.....	11846, 20595
automatic, growth and development of industry.....	1856	indictment and trial of offenders and joint offenders for crime not committed in any district—	
automatic, U.S. export market in Austria.....	16870	law.....	11719
current industrial reports.....	9723	reports.....	6175, 9966
operated by postal employees, Post Office Dept. furnishing utilities, GAO review.....	8319	Venus (planet):	
their changing fortunes, USSR report.....	2844	atmosphere, determining characteristics from gas-dynamic behavior of probe vehicle.....	9184
Veneers:		atmosphere, photochemical problems.....	14591
Federal item identification guides for supply cataloging, supplements.....	3655	brightness temperature at 1.35 cm.....	18252
softwood, current industrial reports.....	15068	dark side airglow.....	19894
Veneral diseases:		Mariner II reports.....	10981
basic statistics on problems in U.S., fact sheet, 1962.....	9361	natural and induced environments encountered in interplanetary space and methods of simulation, investigation.....	4392
current literature, abstracts.....	1399, 3410	radar observations, USSR study.....	2551
immediate treatment of minors upon their own consent, by Public Health Department of D.C.—		Venute, Donald J., import tariff system of Somali Republic.....	10335
hearing.....	10008	Verde River, water supply outlook and snow survey.....	4284
law.....	20426	Verdigris River:	
reports.....	6159, 13786	flood control, engineer report—	
teenagers, sociological study.....	177	departmental edition.....	4872
<i>see also</i> Syphilis.		document edition.....	4652
Venezuela:		Vermeer, James, economic appraisal of 1961 feed grain program.....	13840
alliance for progress programs, report on study mission.....	8023	Vermiculite, minerals yearbook chapter.....	18113
print as S. Doc., report.....	20571	Vermont:	
British Guiana boundary, study.....	20166	county business patterns, activities covered by OASDI program.....	11614, 18669
Communist deputies visit prisoners in defiance of order.....	2694	District Court, terms to be held at Montpeller and St. Johnsbury, report.....	9969
Communist Party, anti-terrorist faction drafts manifesto.....	2832	electric rate book.....	20675
economic developments, 1962.....	8410	5B redevelopment area, statistical profiles.....	11699, 15133
education, development.....	10065	minerals industry, minerals yearbook chapter.....	18081
exports and imports, licensing and exchange controls.....	8415	north-central, tale-bearing ultramafic rocks and adjacent country rocks, petrology and geochemistry.....	603
Government reaction to murder of high school teacher by extremists.....	2617	population, 1960, characteristics.....	18666
illegal entry of Chinese.....	2584	public school finance program, 1962-63.....	15445
investment guarantees, agreement.....	13086	upper Missisquoi Valley and vicinity, bedrock geology and asbestos deposits.....	19292
military prosecutor brings charges against 139 guerrillas.....	2484	ZIP code directory.....	18270
parliamentarian denounces terrorist line of CP and MIR (address).....	2521	Vertebrates, ecological survey of White Oak Lake, etc.....	11567
peasantry, guerrilla threats against.....	2859	Vertical coordination in agriculture.....	4801
University's School of Journalism exposed as Marxist indoctrination Center by LaEsfera newspaper.....	2695	Vertical lift crest gates.....	2210
Venezuelan comments on alliance for progress.....	751	Vertical sintering furnace, USSR.....	12519
Vennard, Edwin, judging your electric power needs.....	7429	VES, <i>see</i> Veterans Employment Service.	
Venom, poisonous snakes of world, manual for use by U.S. amphibious forces.....	16454	Veselenak, Helen, relief.....	7899
Ventilation:		Ve-Shen Hsiang, testimony, hearings.....	2100
emergency construction, design, engineering manual.....	6372	Vessels, <i>see</i> Fishing vessels—Shipbuilding—Ships.	
mechanical, for drying ear corn.....	5834	Vesta (asteroid):	
normal and blocked middle ear.....	4409	rectangular coordinates, 1960-80.....	7344
shell systems for potato storages in fall crop area.....	5826	Vestnik Akademii Meditsinskikh Nauk, SSSR (periodical):	
<i>see also</i> Mine ventilation.		translations.....	2590
Ventura, Calif.:		6794, 6994, 8511, 10643, 10675, 12682, 16224, 19530, 20818	
coastal area, cooperative beach erosion control study, engineer report—		Vestnik Akademii Nauk SSSR (periodical):	
departmental edition.....	405	translations.....	8847, 10721, 12373, 12661, 17768
document edition.....	229	Vestnik khirurgii (periodical):	
Venturi tube, flow, effects of air content and water purity on liquid tension in incipient cavitation.....	9146	translations.....	2463, 2678



# JANUARY-DECEMBER

	Entry
Vestnik khirurgii imeni I. I. Grekova (periodical) :	
translations -----	1054, 10613
Vestnik rentgenologii i radiologii (periodical) :	
translations -----	6042
Vestnik svyazi (periodical) :	
translations -----	2651, 6700, 7110, 8690, 10746, 12443, 12673, 14173, 17951, 19547, 19660.
Vetch. see Crownvetch.	
Veterans :	
benefits—	
automobiles for cold war-connected disability, authorize, report -----	11962
available for veterans and dependents, fact sheet -----	11373
slide chart calculator, 1962 -----	308
veterans with conditional discharges, report -----	18870
blind, grants for specially adapted housing, expand report -----	6149
burial allowances, amend law, report -----	18868
civil service preference -----	9756
deceased, burial expenses, pay when discharges changed from dishonorable, amend U.S. Code—	
law -----	7822
reports -----	4731, 6276
disability evaluation examinations, physician's guide -----	14766
disabled—	
automobiles, liberalize provisions, hearing -----	8126
educational assistance to children, report -----	15289
drugs and biologicals, assist in obtaining, hearings -----	15334
employment, local VER service to veterans, instructor's guide -----	15453
employment services through State-Federal affiliated agencies, report, July 1962-June 1963 -----	17404
home-buying guide -----	16641
hospitalization in Alaska and Hawaii, hearing -----	8126
Korean conflict—	
education, etc., provisions of U.S. Code, title 38, chap. 43, repeal, report -----	6143
job adjustment of psychiatrically disabled -----	9481
laws, compilation, supplement -----	218
loans, guaranteed and direct—	
by VA properties acquired upon default, GAO report on excessive costs -----	17507
walver of indebtedness to U.S. in certain cases arising out of default—	
hearing -----	8126
law -----	18788
reports -----	6147, 11959
loans, guaranty or insurance, VA lenders handbook, change -----	1584
medical care, intermediate and nursing home—	
hearings -----	15334
report -----	15291
medical care, 1870-1960, bibliography -----	9479
miscellaneous bills, hearing -----	8126
number in United States, 1960 -----	1879
pensions, enlisted men, credit inactive Reserve service—	
hearings -----	13640
reports -----	13606
Philippine, hospitalization and medical care, extend program—	
hearing -----	8126
law -----	13414
reports -----	6140, 11960

	Entry
Veterans—Continued	
Philippine Islands hospitalization, etc., agreement with Philippines -----	16600
post-Korean readjustment assistance act of 1963—	
hearings -----	12026
report -----	13761
relief, code of Federal regulations -----	10170
service-connected psychosis and psychoneurosis, employment adjustment -----	11372
social security benefits -----	7375
therapeutic and rehabilitation devices, furnish, hearings -----	15334
unemployment compensation—	
act of 1958, facts for ex-servicemen -----	17403
operations reports -----	17406
World War II, job adjustment of psychiatrically disabled -----	9481
see also Life Insurance—Pensions—	
Rehabilitation of the disabled.	
Veterans Administration :	
administrator's decision -----	3416
appropriations—	
1963, proposal -----	7863
1964, hearings -----	18919
automatic data processing system installation at Hines, Ill., Dept. of Veterans Benefits, GAO review -----	12213
budget, 1964, amendment -----	13460
career opportunities—	
chief, nursing service training program, facts -----	7503
Dietetic Service -----	11374
Nursing Service, your bright career as nurse -----	18361
practical nursing -----	11375
drug policies, interagency coordination, hearings -----	4781, 10014
employees—	
air travel authorized, GAO review -----	10265
quarters, housekeeping, Los Angeles, renovation, GAO review -----	5007
quarters, rental charges, etc., GAO review -----	2332
facilities, definition of term, amend U.S. Code, report -----	11963
fact sheet, IS (series) -----	11373
form and form letter management at field stations -----	20222
grants to blind veterans for specially adapted housing, expand, report -----	6149
hospitals, construction program, reports -----	7927, 11844
information bulletin IB series -----	9476-77, 20220
legislative policy on VA programs, hearings -----	11914
librarians, examination announcement -----	1938
loans, guaranteed and direct—	
properties acquired upon default, GAO report on excessive costs -----	17507
walver of indebtedness of U.S. in certain cases arising out of default—	
hearing -----	8126
law -----	18788
reports -----	6147, 11959
manual -----	3394
medical research and development, indemnification of research contractors, report -----	18862
medical research, report -----	9480
new modified life plan for NSLI policyholders, reports -----	6145, 11991
personnel information bulletin -----	4015
pharmacies, require to fill private physicians' prescriptions, GAO report -----	15594

# INDEX 1963

Entry	Entry
Veterans Administration—Continued	Veterinary medicine:
professional careers, opportuni-	Bulgaria, reorganization of service, 5192
ties ----- 13110, 18360	National Agricultural Library, vet-
publications, index ----- 1582	erinary medical periodicals
report, 1962—	currently received, list ----- 11093
departmental edition ----- 9474	opportunities for doctors in
document edition ----- 7848	ARS ----- 4364-65
safety and fire protection bulletin, 9476, 20220	Veterinary Medicine Week:
technical reports ----- 11372	proclaim—
VA-Armed Forces cooperative study	law ----- 15157
on chemotherapy of tuberculo-	report ----- 13618
sis ----- 9475	Veterinary zoology, <i>see</i> Zoology.
VA Medical Research Conference,	Vhay, John S., geology and mineral
abstracts ----- 1581	deposits of area south of Tellu-
VA pamphlets ----- 1583-84, 7503,	ride, Colo. ----- 6546
9481, 11374-375, 13110, 16641,	VHF communications in air transpor-
18360-361, 20222-223, 21152.	tation, Czechoslovakia ----- 12570
Veterans' Affairs Committee, House:	VHMCP, voluntary home mortgage
calendar ----- 3844	credit program ----- 19342
committee print ----- 18961	Vibration:
hearings ----- 8014, 11914, 15334	acoustic, use to improve heat trans-
investigations and studies—	fer rates and reduce scaling in
authorization, report ----- 6108	distillation units for saline wa-
expenses, report ----- 6136	ter conversion ----- 625
reports ----- 4730-32, 6140, 6143-49,	aircraft engine T-37/J-49, tests, 9607
7927, 7943, 15289-291, 17109,	blasting, at Iowa limestone quar-
18862, 18868-870, 18882, 20465.	ries ----- 16340
Veterans Benefits Department, auto-	cylinders, circular, partly filled
matic data processing system	with liquid, NASA report ----- 19916
installation, GAO review ----- 12213	damping capacity of magnesium al-
Veterans Canteen Service, audit,	loys ----- 1250
1962, GAO report ----- 12198	Delta 9 launch vehicle, flight data,
Veterans Employment Service, local	disease and thermal dehydration,
service to veterans, instruc-	USSR ----- 8935
tor's guide ----- 15453	effect on peripheral nerve trunks,
Veterans hospitals:	USSR experimental study ----- 17995
cancer suicide cases, analysis ----- 9478	field vibratory techniques for de-
construction program of VA, re-	termining elastic moduli of
ports ----- 7927, 11844	soils, procedures ----- 13883
convalescent and nursing home	flight data of Echo A-12 applica-
care—	tion vertical tests AVT-1 and
hearings ----- 15334	AVT-2 ----- 19923
report ----- 15291	from instantaneous and millise-
directors, additional pay, report, 6146	cond-delayed quarry blasts ----- 5479
mentally ill patients, family plays	fuel rods in parallel flow ----- 9676
important part in treatment ----- 1583	in-plane, of flat spinning disk, cor-
prebed care, report, Feb.-May 1962, 18961	rected copy ----- 1269
volunteer workers, handbook ----- 21152	lateral, characteristics of model of
Veterans Memorial Hospital, Manila,	Saturn SA-1, investigation ----- 5592
use, agreement with Philip-	mechanical, effect on nervous sys-
pines ----- 16600	tem ----- 1777
Veterans of Foreign Wars of United	random, of structures, role of non-
States:	linearity ----- 9190
convention, proceedings ----- 13455	rocket vehicles, vibratory localized
legislative objectives, 1963, hear-	environments, predicting tech-
ings ----- 8014	niques ----- 19912
Veterans of World War I of the	sinusoidal testing of nonlinear
United States, Inc.:	spacecraft structures ----- 19910
convention proceedings, print as	sonic, control in ships ----- 8536
House document—	testing, mechanical impedance sim-
law ----- 17035	ulation ----- 16389
reports ----- 15234, 15363	warning signal potential, compara-
legislative objectives, 1963, hear-	tive evaluation ----- 1769
ings ----- 8014	<i>see also</i> Oscillations.
Veterans' organizations, legislative	Vibration mounts, vibration isolation
objectives, 1963, hearings ----- 8014	mounts, types, USSR study ----- 17963
<i>see also</i> names of organizations.	Vice President of United States:
Veterinarians:	campaign, 1964, suspend equal time
Agricultural Research Service—	provisions of communications
duties and responsibilities ----- 14841	act—
opportunities ----- 4364-65	hearings ----- 9940, 17307
examination announcements ----- 16957	reports ----- 11820, 11843
discontinuance notice ----- 16943	nomination and election method,
Soviet, conferences ----- 5392	constitutional amendments,
specialization of 1st class, regula-	hearings ----- 17318
tions, Yugoslavia ----- 10683	presidential transition act—
student trainee, summer employ-	hearing ----- 9937
ment, examination announce-	reports ----- 9914, 15238
ment ----- 20385	succession upon presidential ina-
Veterinary instruments and apparatus,	bility, hearings ----- 15397
equipment and supplies,	Vicksburg, Miss., consumer expendi-
Federal item identification	tures and income, 1960 ----- 14460
guides for supply cataloging,	
supplements ----- 3657	

# JANUARY-DECEMBER

Entry	Entry
5192	Vicksburg National Military Park : consolidate lands, promote safety, etc., by installation of park tour road—
11093	law reports 11729
64-65	general information 8066, 9905
15157	Victoria Land, Antarctica, Mount Gran coal deposits 11124
13618	Vienna, Md., soybean processing plant, ARA loan, hearing 12834
	Viereck, Eleanor G., influence of cold on host-parasite interactions 11872
6546	Vietnam : agricultural commodities, agreement 18489
12570	demarcation line, study 11322
19342	Democratic Republic, see, below, North. fact sheet 20164
625	international Communist developments, translations 9396
9607	market for U.S. products 14374
6340	North—cement factory, expansion 7017
9946	Communist developments 6817
1250	cooperative production units, improve management (speech) 16067
0978	economic development, 1961—economy, translations 6904
8935	949, 1099, 2479, 2592, 2701, 2788, 5159, 5170, 5296, 5335, 6692, 6757, 6814, 6848, 6988, 7013, 7100, 8598, 8845, 8954, 10368, 10388, 10589, 10692, 10819, 10834, 10838, 12390, 12431, 12466, 14190, 14362, 15721, 15987, 16254, 19398, 19519, 19610, 19741, 20782, 20871
7995	first 5-year plan, 1961-65 14354
3883	freight shipments to, international regulations, Austrian study 19421
9923	international Communism, articles 7001
5479	labor unions, role in industrialization, etc., party resolution 15722
9676	let us hold high revolutionary banner of creative Marxism (talk) 12336
1269	medical developments 2908
5592	military unit citations awarded in 1962 17781
1777	morphology and development of kegelkarst 17772
9190	people's councils and administrative committees, organization law 1059
9910	political and sociological information, translations 645
8536	710, 927, 1059, 1147, 2700, 2750, 2787, 2991, 5322, 6736, 6919, 7019, 7104, 8498, 8839, 10373, 10693, 10849, 10872, 12391, 12482, 12620, 14150, 14232, 14313, 14336, 14363, 15682, 15722, 15832, 15999, 16067, 16210, 19408, 19605, 20792, 20891
6389	protect party organization by good management of cadres and party members 10487
1769	resolutions of 8th Party Conference (speech) 15832
7963	road building under tropical conditions 10433
7307	scientific and technical information, translations 6813
1843	transportation, problems of non-mechanized facilities 2751
7318	zonal autonomy with regard to nationalities, implementing policy in Viet Pac zone 17681

Entry	Entry
	Vietnam—Continued
	peasants, nature, translations 17704, 17763
	pocket guide 4436
	preparing shipments to Republic 5066
	agricultural commodities, agreement 7454, 20188
	credit expansion relations between industry and State banks 2732
	economy, basic data 6593
	investment guaranties, agreement 20187
	news coverage, govt. information plans and policies, hearing 17169
	United States information problems, report 18871
	Vietnam and southeast Asia, report 6298
	South, see, above, Republic.
	Vigness, I. : effect of chamfered holes on resistance of bolts and dowels to shock loads in shears 11160
	numerical method for determining thermal stresses involving plastic flow 3223
	Village Creek District, Ark. : flood control, engineer report—departmental edition 464
	document edition 270
	Villareal, Nicholas E., relief 6097
	Vimmerstedt, John P., southern Appalachian white pine plantations, site, volume, and yield 6524
	Vinalhaven, Maine : Carvers Harbor improvement, engineer report—departmental edition 403
	document edition 315
	Vine, James D., surface geology of Nash Draw quadrangle, Eddy County, N. Mex. 6549
	Vineyards, land use, problems and conservation treatment, Western States 11289
	VINITI, see Union of Soviet Socialist Republics.
	Vinyl, metal laminates, standard of trade 1857
	Vinyl-coated glass fiber insect screening and louver cloth, recorded voluntary standard of trade 4513
	Vinyl fabrics, see Textiles.
	Virgin Islands : agriculture department, directory, 1963 7529
	census of housing, 1960, outlying areas, tenure, rent, plumbing, etc 1920
	climatological data 3517
	coast pilot 1957
	country business patterns, activities covered by OASDI program 16889
	foreign dredge act, nonapplicability, opinion of Attorney General 19774
	government, amend revised Organic act to authorize issuance of general obligation bonds, reports 7919, 7947, 20578
	Governor, report, 1962 10312
	mineral industry, minerals yearbook chapter 19852
	nurses in public health, number and educational preparation 3295
	population, 1960, characteristics 20349
	special duty exemption, law 13427
	storm warning facilities chart, 1963 11385

# INDEX 1963

Entry	Entry
Virgin Islands—Continued	Virusologiya i immunologiya raka
submerged lands, place within jur-	(periodical):
isdiction, of Government of,	translations
reports	6946
water resource development, map--	Visas, see Passports.
ZIP code directory	Viscometers, see Viscosimeters.
20063	Viscosimeters, NBS calibrating liq-
Virgin Islands Corporation:	uids and capillary tube vis-
appropriations, 1964--	cometers
law	3174
reports	Viscosity:
audit by GAO	blood, in vivo method to measure
10257	and factors associated with
audit report, 1962	hindrance
15183	7631
Virgin River and Valley, Dixie proj-	gases at high temperature
ect, development report	19945
15181	Viscous flow, see Flow.
Virginia:	Viselli, Andreina, relief
annual survey of manufactures,	20554
1961, standard metropolitan	Viseu, Arminda P., relief
statistical areas, and large in-	11791
dustrial counties, statistics--	Vision, see Eyes—Sight.
4568	Visiting housekeepers:
civil rights, public schools, 1962--	do you have homemaker service in
1935	your town
climatological data	20076
3517	homemaker services, available help
costs of operating exempt for-hire	13032
motor carriers of agricultural	Visitor reaction to timber harvesting
commodities, pilot study	in Boundary Waters Canoe
8152	Area
county business patterns, activities	6509
covered by OASDI program	Visual acuity, see Acuity.
15051	Visual aids, AFVA, Air Force visual
crops and livestock	aid series
4279	18456
electric rate book	Visual art, see Art.
514, 17433	Visual instruction, medicine, lantern
Federal-aid highway program, GAO	and microscopic slide sets, cat-
review	alog
5008, 12214	18549
firefighting agreements with D.C.,	see also Audio-visual education.
amend act, report	Visual perception, see Perception.
7976	Visual study of 2-phase flow in ver-
5B redevelopment area, statistical	tical tube with heat addition
profiles	5586
11696, 13367	Vital statistics:
Great Falls property, exchange for	data evaluation and methods re-
land at Blue Ponds, Md., re-	search
port	14673-674, 16537
13726	data from national health sur-
landings, fish and shellfish	veys
4280, 9579,	14675-676, 16538, 20112
marketing farmers' stock peanuts	programs and collection proced-
13174	ures
mineral industry, minerals yearbook	18296
chapter	provisional, monthly report
3069	3928
population, 1960, characteristics	publications, price list
15046	1397
precipitation data, hourly	safeguards for records
3771	16533
saprolite and unweathered diorite	special reports
ores, flotation of ilmenite	20113-115
5498	national summaries
weather stations, decadal census	18297
16687	United States, facts of life and
ZIP code directory	death
20070	20094
Virginia Key, Fla.:	United States, 1960
beach erosion control study, engi-	21094
neer report--	annual report
departmental edition	1432, 11247, 13029-31
document edition	mortality
2179	14677, 21094
document edition	use for genetic and radiation
1996	studies
Virginia State College, retraining pro-	1431
gram for unemployed and un-	see also Life tables.
skilled adults, evaluation (re-	Vitamins:
marks)	B <sub>12</sub> , absorption during alterations
14436	in environmental temperature
Virology, see Viruses.	18484
Virology and immunology of cancer	effect of ascorbic acid on function
(USSR periodical):	of suprarenal glands under in-
translations	fluence of high ambient tem-
6946	perature, USSR study
Virulence as factor in Salmonella in-	14413
fection in mice maintained in	needs of dairy cattle
the cold	14837
18467	requirements in Antarctic regions
Virus diseases, ionizing radiation ef-	7194
fect on infections and immu-	riboflavin deficient rats, post cold
nity	behavior
9669	1760
Viruses:	thiamine excretion, effect of high
influence of cold on host-parasite	fat diet
interactions	1761
18489	Vitamin E, effect on performance
retention of viral agents by Arctic	of swimming rats
ground squirrels, effect of hi-	7687
bernation	Vocational Division, bulletins
18476	390, 15436
role in etiology of leucoses, USSR	Vocational education:
study	act of 1963--
8871, 15803	hearings
study at Inframicrobiology Insti-	reports
tute, Bucharest, Rumania	13533, 15270, 20473, 19019
8863	economic and social background in
Sendai, interaction with tissue cul-	U.S.
ture cells, luminescent micro-	13846
scopy study during initial	education for changing world of
phase, USSR study	work, report of Panel of Con-
12491	sultants on Vocational Educa-
translations from Voprosy virus-	tion
ologii (USSR periodical)	10066, 13844-846
12715	summary
	2156
	export trade program, planning,
	etc
	15436

# JANUARY-DECEMBER

	Entry
Vocational education—Continued	
extend training opportunities for manpower guidance (address).....	3012
ILO convention and recommendations, text.....	20457
Indians, adult, amend act, report.....	17260
laws, compilation.....	216
legislative proposals, 1963, summary.....	6342
mechanical technology, 2 year post high school programs in mechanical design and production.....	2163
sociological analysis of vocational education in U.S.....	13846
State boards, digest of reports, 1961.....	8159
training survey, results.....	6342
see also subject.	
Vocational guidance, economic setting.....	20931
Vocational rehabilitation, see Rehabilitation of the disabled.	
Vocational Rehabilitation Administration:	
GTP bulletin.....	16644
guidance, training, and placement, 15th annual workshop, proceedings.....	9483
rehabilitating physically handicapped, advisory groups.....	14767
Vocational Rehabilitation Office:	
report, 1962.....	16643
research and demonstration projects, bibliography.....	1589
Voegelín, L. Belle:	
classification—	
class A, general works, polygraphy.....	9086
class Q, science.....	9087
Voegelin, Eric, and wife, relief.....	17084
Vogler, L. E., curves of ground proximity loss for dipole antennas.....	11101
Vogler, Raymond D., pressure distributions on surface of flat plate induced by cold air jet.....	7276
Voice:	
aphonia, compensations for veterans—	
law.....	11714
reports.....	4732, 9975
Voice-frequency circuit, loading for trunk cables.....	3315
Voice-frequency telegraphy systems, USSR.....	12681
Voice of America:	
broadcasts to captive European nations, objectives and effectiveness, report on hearings.....	9880, 18940
catalog of selected programs.....	14761
doubles its power, new Greenville complex.....	5761
Vojvodich, Nick S., influence of heating rate and test stream oxygen content on insulation efficiency of charring materials.....	14573
Volatilization, see Evaporation.	
Volcanic ash, tuff, etc., beryllium-bearing, Thomas Range, Juab County, Utah.....	10286
Volcanic rocks, see Igneous rocks.	
Volcanoes, emanations, geochemistry data.....	8339
Vollin, Lazar, agricultural picture in U.S.S.R. and U.S.A.....	12051
Volta, Upper, see Upper Volta.	
Voltage regulators, transistorized voltage stabilizer.....	9192
Voltage stabilizers, see Voltage regulators.	
Voltages:	
breakdown, of some electronegative gases at low pressures.....	12872

	Entry
Voltages—Continued	
calibration, ac or dc (60 cps) indicating instruments, Navy program, technical manual.....	16467
magnetic core voltage-to-frequency converter.....	5606
microvoltages, measurement.....	9276
standing wave ratio % coaxial, type N connector, measurement system operation procedure.....	9288
transmission line construction, specifications and drawings.....	11257, 11259
insert.....	14683
Voltmeters:	
DC or AC voltage or current indicating instruments, Navy calibration program, technical manual.....	18261
electronic—	
AN/USM-106, Ballantine Laboratories 314, technical manual, Navy calibration program.....	20002
Ballantine Laboratories 310A, Navy calibration program, technical manual.....	18256
volt-ohm-milliammeter, Simpson 260, test instrument calibration procedure.....	9284
Volume and yield tables:	
aerial photo volume tables, constructing.....	6492
aerial volume tables for pinyon-juniper stands.....	4983
basal area table for diameters from 1 to 240 inches.....	10225
board-foot and cubic-foot volume computing equations for southeastern tree species.....	10243
composite aerial volume tables for conifers in Mountain States.....	20697
Engelmann spruce, lumber grade recovery in Colorado.....	12190
ponderosa pine—	
immature stands in Black Hills, in Arizona and New Mexico—	
estimating past diameters.....	17493
taper table pole-size.....	17494
ponderosa pine, southwestern, southwestern, estimating volumes and diameters at breast height from stump diameters.....	17495
shortleaf pine—	
in Virginia-Carolina Piedmont, top utilization, adjusting for different limits.....	6518
southern pine lumber grade yields, white pine, southern Appalachian plantations.....	6522, 6524
Volumetric apparatus:	
testing of glass.....	7310
testing of metal.....	9208
Voluntary foreign relief programs, activities of registered American voluntary agencies.....	5098
Volunteer workers:	
veterans hospitals, handbook.....	21152
young people for good of your community, your hometown needs you for variety of useful jobs.....	10888
Volz, Marvin D., centralized processing of fresh meat for retail stores.....	18435
Vom Rath, William H., relief.....	13082
Von Glahn, Uwe H.:	
critical boiling heat flux.....	14548
on effect of heat addition in empirical correlation of void fractions for steam-water flow.....	1282
Von Stroebel, James M., Brazil's licensing and exchange controls.....	6607



# INDEX 1963

Entry	Entry
Von Wald, W. A., Jr.: electrical calorimeter as integrat- ing device..... 11159 environmental telemetering system..... 20001	Waddell, Galen G., mining methods and costs, Deep Creek zinc- lead mine, etc..... 14500 Wadsworth, Nev., ground-water con- ditions in area..... 8351
Von Winkle, William A., measure- ments of longitudinal space- time correlations of wall pres- sure fluctuations in turbulent pipe flow..... 11263	Wagar, J. Alan: campgrounds for many tastes..... 19268 convection stack, device for ridding pit toilets of bad odor..... 10218
Voprosy biofiziki, biokhimii i patologii eritrotsitov (periodical): translations..... 10836	Wage and Hour and Public Contracts Divisions: explanatory bulletins... 14770-771, 18362 industry pamphlets..... 5766, 20229 interpretative bulletins..... 1591, 3396, 7504, 9486, 11378, 16645- 649, 18364, 20230
Voprosy filosofii (periodical): translations..... 988	publications, list..... 16650 regulations..... 3397, 9487-88, 20231
Voprosy gerontologii i geriatrii (pe- riodical): translations..... 6947	Wage earners, <i>see</i> Labor. Wage-hour act, <i>see</i> Labor standards. Wage-hour law in small firms..... 5718
Voprosy ikhtologii (periodical): translations..... 10482, 10800, 14174	Wagener, Willis W., judging hazard from native trees in California recreational areas, guide for professional foresters..... 15583
Voprosy kliniki i lecheniya zlokachest- vennykh zabolevaniya (period- ical): translations..... 15839	Wages: accrued vacation pay, deductibility, extend time..... 20434 law..... 11851, 17286 reports..... 11851, 17286
Voprosy meditsinskoy khimii (periodi- cal): translations..... 970, 2764	amend Davis-Bacon act to include fringe benefits..... 11892 hearings..... 11796
Voprosy pitaniya (periodical): translation..... 1055	battery manufacture earnings, Jan. 1962..... 3041
Voprosy psikhologii (periodical): translations..... 933, 10420, 12705	Canal Zone, Federal wage and hour law, application..... 9485
Voprosy virusologii (periodical): translation..... 12715	chronologies— Armour and Co., 1941-63..... 20926 directory..... 18043
VOR, <i>see</i> Omniranges.	International Shoe Co., 1945-64..... 19785
Voreess, Hugh E., peaceful uses for nuclear explosives, bibliogra- phy..... 7707	Lockheed Aircraft Corp., Cali- fornia Company, 1937-61..... 1161
Vortex motion, aircraft wakes in rela- tion to terminal operations..... 9185	Martin-Marietta Corp., Baltimore plant, 1944-61..... 9048
Voss, Gilbert L., cephalopods of Phil- ippine Islands..... 19974	North Atlantic longshoring, 1934-61..... 7144
Vostene, Louis F.: aerodynamic heating tests of mis- sile stabilizers..... 11002 supersonic jet tests of missile stab- ilizer..... 5560	collective bargaining agreements, escalator clauses, Oct. 1962..... 3035
Voting, elections conducted by NLRB, information to voters..... 3180	community surveys, directory, 1948-June 1962..... 1181
VR-ISC series..... 9484	current developments..... 3577
VRA, <i>see</i> Vocational Rehabilitation Administration.	Davis-Bacon act, administration, hearings and appendix..... 4753
Vrachebnoye delo (periodical): translations..... 1012	deferred increases and escalator clauses, 1952-63..... 9049
VTOL, <i>see</i> Aircraft—Airplanes.	deferred increases due in 1963 and escalation..... 3038
Vuillemot, F. L., Naval aerial photo- graphic analysis, Project Se- dan..... 14996	District of Columbia, selected in- dustries, 1962..... 5452
<b>W</b>	
W.A.C., <i>see</i> Women's Army Corps.	earnings series, manufacturing, summary..... 1159, 7143
W.A.D.C., <i>see</i> Wright Air Develop- ment Center.	earnings statistics, U.S., 1909-62..... 19792
W.A.D.D., <i>see</i> Wright Air Develop- ment Division.	economic indicators relating to equal pay, 1963..... 20255
W.A.L., <i>see</i> Watertown Arsenal Lab- oratories.	employee earnings, nonmetropolitan areas of central regions, June 1962..... 14480
W.H.O., <i>see</i> World Health Organiza- tion.	employee earnings, retail trade, June 1961— apparel and accessory stores— departmental edition..... 3029 document edition..... 2013
W.S. series..... 3741	automotive dealers and service stations..... 3028
W series..... 4300	departmental edition..... 2012 document edition..... 3025
Wabash River: survey, Mount Carmel, Ill., flood control, engineer report— departmental edition..... 2225 document edition..... 2001	document edition..... 2009 drug and proprietary stores— departmental edition..... 3031 document edition..... 2015
WAC, <i>see</i> Women's Army Corps.	
Waco, Tex., Municipal Airport, weath- er observations, hourly, sum- mary, decennial census of cli- mate..... 14796	
WADC, <i>see</i> Wright Air Development Center.	
WADD, <i>see</i> Wright Air Development Division.	

# JANUARY-DECEMBER

	Entry
Wages—Continued	
employee earnings, retail trade, June 1961—Continued	
food and grocery stores—	
departmental edition.....	3027
document edition.....	2011
furniture, home furnishings, and household appliance stores—	
departmental edition.....	3030
document edition.....	2014
general merchandise stores—	
departmental edition.....	3026
document edition.....	2010
overall survey—	
departmental edition.....	9052
document edition.....	7835
employee earnings retail trade, June 1962.....	12812
employment and earnings (periodical).....	3614
employment and earnings statistics for States and areas, 1939-62.....	14476
factory earnings reach \$100 a week.....	18045
fair labor standards act—	
agriculture, etc., exemptions.....	18365
automotive parts wholesaling, application.....	5766
construction industry, coverage, forestry or lumbering operations, application.....	18364
general coverage of wage and hour provisions.....	16648
overtime compensation.....	7504, 20230
farm labor market developments employment and wage supplements.....	16645
farm working force, hired, education, skill level and earnings, 1961.....	3642-43
hourly, index for hydraulic turbine establishments.....	6317
hours and earnings, labor force monthly report.....	3780
industry and union scale studies, 1950-June 1963, directory.....	3921
industry surveys—	19796
bituminous coal mining.....	10794
communications—	
departmental edition.....	1171
document edition.....	276
electric and gas utilities.....	19793
fertilizer manufacturing.....	14473
flour and other grain mill products—	
departmental edition.....	1168
document edition.....	273
hosiery—	
departmental edition.....	5448
document edition.....	4704
leather tanning and finishing.....	14478
machinery manufacturing.....	9061
pulp, paper, and paperboard mills—	
departmental edition.....	1170
document edition.....	275
southern sawmills and planing mills.....	12807
wood household furniture.....	16290
wool textiles.....	18041
long hours and premium pay.....	19799
manufacturing industry, developments, summary release.....	4281
minimum—	
civil service examination announcements, amendments.....	1936, 7779
fair labor standards act, sec. 4(d), report to Congress, Jan. 1963.....	7505
50 States, District of Columbia, and Puerto Rico.....	14805
State laws.....	21179
net spendable earnings, monthly release.....	3955

	Entry
Wages—Continued	
occupational earnings in major labor markets, 1962-63.....	9079, 16298
occupational groups in metropolitan areas, trends.....	19806
occupational surveys—	
Akron, Ohio—	
departmental edition.....	18036
document edition.....	17063
Albany-Schenectady-Troy, N.Y.—	
departmental edition.....	12800
document edition.....	11744
Albuquerque, N. Mex.—	
departmental edition.....	14470
document edition.....	13451
Allentown-Bethlehem-Easton, Pa.-N.J.—	
departmental edition.....	10907
document edition.....	9828
Atlanta, Ga.—	
departmental edition.....	16262
document edition.....	15173
Baltimore, Md.—	
departmental edition.....	7164
document edition.....	6075
Beaumont-Port Arthur, Tex.—	
departmental edition.....	16278
document edition.....	15169
Birmingham, Ala.—	
departmental edition.....	12802
document edition.....	11746
Boise, Idaho—	
departmental edition.....	16285
document edition.....	15176
Boston, Mass.—	
departmental edition.....	5442
document edition.....	4698
Buffalo, N.Y.—	
departmental edition.....	9057
document edition.....	7840
Burlington, Vt.—	
departmental edition.....	12797
document edition.....	11741
Canton, Ohio—	
departmental edition.....	14471
document edition.....	13452
Charleston, W. Va.—	
departmental edition.....	14468
document edition.....	13449
Charlotte, N.C.—	
departmental edition.....	14465
document edition.....	13446
Chattanooga, Tenn.—	
departmental edition.....	3033
document edition.....	2020
Chicago, Ill.—	
departmental edition.....	16276
document edition.....	15167
Cincinnati, Ohio-Ky.—	
departmental edition.....	12801
document edition.....	11745
Cleveland, Ohio—	
departmental edition.....	5441
document edition.....	4697
Columbus, Ohio—	
departmental edition.....	7167
document edition.....	6078
Dallas, Tex.—	
departmental edition.....	7162
document edition.....	6073
Davenport-Rock Island-Moline, Iowa-Ill.—	
departmental edition.....	5445
document edition.....	4701
Dayton, Ohio—	
departmental edition.....	10899
document edition.....	9820
Denver, Colo.—	
departmental edition.....	10897
document edition.....	9818
Des Moines, Iowa—	
departmental edition.....	10904
document edition.....	9825

# INDEX 1963

Entry	Entry
Wages—Continued	
occupational surveys—Continued	
Detroit, Mich.—	
departmental edition.....	12794
document edition.....	11738
Fort Worth, Tex.—	
departmental edition.....	7166
document edition.....	6077
Green Bay, Wis.—	
departmental edition.....	1173
document edition.....	278
Greenville, S.C.—	
departmental edition.....	16279
document edition.....	15170
Houston, Tex.—	
departmental edition.....	18037
document edition.....	17064
Indianapolis, Ind.—	
departmental edition.....	7165
document edition.....	6076
Jackson, Miss.—	
departmental edition.....	10905
document edition.....	9826
Jacksonville, Fla.—	
departmental edition.....	10902
document edition.....	9823
Kansas City, Mo.-Kans.—	
departmental edition.....	7163
document edition.....	6074
Lawrence-Haverhill, Mass.—	
N.H.—	
departmental edition.....	16288
document edition.....	15179
Little Rock-North Little Rock,	
Ark.—	
departmental edition.....	1176
document edition.....	281
Los Angeles-Long Beach, Calif.—	
departmental edition.....	14469
document edition.....	13450
Louisville, Ky.-Ind.—	
departmental edition.....	12795
document edition.....	11739
Lubbock, Tex.—	
departmental edition.....	16283
document edition.....	15174
Manchester, N.H.—	
departmental edition.....	1172
document edition.....	277
Memphis, Tenn.—	
departmental edition.....	10900
document edition.....	9821
Miami, Fla.—	
departmental edition.....	9058
document edition.....	7841
Milwaukee, Wis.—	
departmental edition.....	14466
document edition.....	13447
Minneapolis-St. Paul, Minn.—	
departmental edition.....	10901
document edition.....	9822
Muskegon-Muskegon Heights,	
Mich.—	
departmental edition.....	16280
document edition.....	15171
New Haven, Conn.—	
departmental edition.....	9059
document edition.....	7842
New Orleans, La.—	
departmental edition.....	10906
document edition.....	9827
New York, N.Y.—	
departmental edition.....	18034
document edition.....	17061
Newark and Jersey City, N.J.—	
departmental edition.....	12793
document edition.....	11737
Norfolk-Portsmouth and Newport	
News-Hampton, Va.—	
departmental edition.....	16286
document edition.....	15177
Oklahoma City, Okla.—	
departmental edition.....	1175
document edition.....	280

Entry	Entry
Wages—Continued	
occupational surveys—Continued	
Omaha, Nebr.-Iowa—	
departmental edition.....	5440
document edition.....	4696
Paterson-Clifton-Passaic, N.J.—	
departmental edition.....	16267
document edition.....	15178
Philadelphia, Pa.-N.J.—	
departmental edition.....	10896
document edition.....	9817
Phoenix, Ariz.—	
departmental edition.....	12803
document edition.....	11747
Pittsburgh, Pa.—	
departmental edition.....	12792
document edition.....	11736
Portland, Maine—	
departmental edition.....	9054
document edition.....	7837
Portland, Oreg.-Wash.—	
departmental edition.....	16284
document edition.....	15175
Providence-Pawtucket, R.I.—	
Mass.—	
departmental edition.....	16281
document edition.....	15172
Richmond, Va.—	
departmental edition.....	5446
document edition.....	4702
Rockford, Ill.—	
departmental edition.....	14464
document edition.....	13445
St. Louis, Mo.-Ill.—	
departmental edition.....	5444
document edition.....	4700
Salt Lake City, Utah—	
departmental edition.....	9055
document edition.....	7838
San Antonio, Tex.—	
departmental edition.....	18033
document edition.....	17060
San Bernardino-Riverside-Ontar-	
lo, Calif.—	
departmental edition.....	5438
document edition.....	4694
San Diego, Calif.—	
departmental edition.....	7161
document edition.....	6072
San Francisco-Oakland, Calif.—	
departmental edition.....	10898
document edition.....	9819
Savannah, Ga.—	
departmental edition.....	14467
document edition.....	13448
Scranton, Pa.—	
departmental edition.....	1174
document edition.....	279
Seattle, Wash.—	
departmental edition.....	3032
document edition.....	2019
Sioux Falls, S. Dak.—	
departmental edition.....	3034
document edition.....	2021
South Bend, Ind.—	
departmental edition.....	12799
document edition.....	11743
Spokane, Wash.—	
departmental edition.....	16277
document edition.....	15168
Toledo, Ohio—	
departmental edition.....	12798
document edition.....	11742
Trenton, N.J.—	
departmental edition.....	9056
document edition.....	7839
Washington, D.C.-Md.-Va.—	
departmental edition.....	5443
document edition.....	4699
Waterbury, Conn.—	
departmental edition.....	12796
document edition.....	11740
Waterloo, Iowa—	
departmental edition.....	5447
document edition.....	4703

# JANUARY-DECEMBER

	Entry		Entry
Wages—Continued		Wal, Young, relief	6219
occupational surveys—Continued		Walt, James R.: antipodal focusing	18193
Wichita, Kans.—		influence of sector ground screen on field of vertical antenna	11097
departmental edition	5439	Wake (aircraft): aircraft vortex in relation to terminal operations	9185
document edition	4695	Wake Island, weather observations, hourly, decennial census	7514
Worcester, Mass.—		Wakefield, Roy M., aerodynamic characteristics of blunt cone-cylinder body with flared afterbodies	10994
departmental edition	18035	WAL, see Watertown Arsenal Laboratories	
document edition	17062	Wald, Niel, cytogenetic study of radium dial-painters	13214
York, Pa.—		Wales, C. P., increasing discharge capacity of silver electrode	18247
departmental edition	10903	Wales: educational data	20633
document edition	9824	west coast, sailing directions, change	21048
occupations by earnings and education, by color	15084	Walker, Audrey A.: official publications—	
overtime pay, basic rates for computing under fair labor standards act	9488	British East Africa, pt. 2, Tanganyika	9090
piece-rate and premium wage system on state farms, USSR		British East Africa, pt. 3, Kenya and Zanzibar	7184
utilization	2532	British East Africa, pt. 4, Uganda	7185
publications, list	3959	Sierra Leone and Gambia	19810
radio and television station employees, exemption from overtime pay under FLSA	3396	Walker, B. E., thermoelectric instability of some noble metal thermocouples at high temperatures	11157
railroad employees, class 1	4282	Walker, Robert H.: Belgium, market for U.S. products, international commerce, supp. economic developments in Belgium, 1962	8412
railroads, nonoperating employees, chronology, 1920-62	14450	establishing business in Belgium	17557
seafaring premium pay	16315	Walker, Russell G., tables of black-body radiation function for wave number calculations	1739
seamen, recommendations of ILO convention, text	20526	Walking, step into action, guidebook for above-knee amputee	9356
shellfish processing industry, Atlantic and Gulf Coasts	9064	Walkowicz, Josephine L., bibliography of foreign developments in machine translation and information processing	14603
shipyards, straight-time hourly earnings, indexes of change, monthly	3781	Wall, John E., union wages and hours, motortruck drivers and helpers	12805
union—		Wallace Lake Reservoir, general information	15456
building trades	12804	Wallach, Hans, effect of learning on visual perception of depth	5657
local transit operating employees	7169	Wallenberg affair unsettled, USSR	16176
motortruck drivers and helpers	12805	Wallis, J. R., rapid method for getting area-elevation information	8298
printing industry	14472	Walkkill River: flood control improvements, engineer report—	
use of price indexes in escalator contracts	19803	departmental edition	2220
USSR—		document edition	2069
piece-rate and premium wage system	2533	Wallops Island: mass spectrometric investigations of atmosphere between 100 and 227 kilometers	16387
supplemental, on experimental-demonstration farms	2531	temperature and wind measurement above 50 km	7287
wages and related benefits, 82 labor markets, 1961-62—		Walls: seawalls, vertical, effect on beach profile	19131
departmental edition	3024	wood brick strip panelling, new way to decorate	17477
document edition	1977	Walpole, Martha, education directory, 1962-63, Federal Government	15427
wages and related benefits, metropolitan areas, United States and regional summaries, 1961-62—		Walsh, D. F., magnesium alloys, vibration damping capacity	1250
departmental edition	14462		
document edition	13444		
women—			
equal pay act of 1963, general information	18363		
equal pay facts	7520		
equal-pay primer, basic questions	7521		
what equal pay principle means, questions and answers	14806		
women, equal pay, no discrimination on account of sex—			
hearings	9928, 10020		
law	11730		
highlights	13113, 14769		
reports	9991, 11797, 11801		
workers covered by State unemployment insurance laws	3615		
worktime required to buy food and other articles	7179		
see also Salaries.			
Wages and Industrial Relations Division, publications, list	3959		
Wagner, Carl L., Jr., Ariel I, evolution of its structure	18149		
Wahlberg, J. S., adsorption of cesium on clay minerals	5017		
Wal Chan Cheng Liu, see Liu, Wai Chan Cheng.			

# INDEX 1963

Entry	Entry
Walsh, John P., training, manpower utilization catalyst-----	14441
Walsh-Healey public contracts act, see Government contracts.	
Walter, L. S., P-T univariant equilibria of reaction forsterite + calcite = monticellite + periclase + CO <sub>2</sub> , experimental studies on Bowen's decarbonation series, II-----	16385
Walters, C. F.: waste disposal system for small groups at remote USAF sites in Arctic-----	18472
water conservation through reuse of flushing fluid in aerobic sewage treatment process-----	1757
Walters, G. G., brined cherries, analytical and quality control methods-----	14839
Walters, Harry E., agriculture in United States and Soviet Union-----	19092
Walters, Jack G., plastic, agglutinating, and free-swelling properties of American coals-----	7204
Walters, Roger E., relations of weights and sizes of broiler parts to carcass weights-----	11459
Walters, Russell S., past growth of yellow-poplar and oak reproduction, key to future-----	15575
Wapato project: delinquent irrigation charges and penalties owed by non-Indian landowners, cancel and defer-----	20440
law reports-----	9908, 19026
War: against growing threat of thermonuclear war, USSR study-----	5238
Marxist-Leninist teaching, eliminate dogmatism and distortions, USSR study-----	19698
unconventional warfare, Philippines, lessons learned 1946-53, facts for Armed Forces (lecture)-----	18534
unconventional warfare, 3d challenge-----	7658
War between the States, see Civil War, 1961-65.	
War claims, see Claims.	
War memorials, see National monuments and memorials.	
War relief, benefits for employees of contractors-----	393
War risk insurance: construction-subsidized vessels, coverage, remove certain limitations-----	17177
hearings-----	19013
report-----	
Ward, Cordelia T., major agreement expirations and reopenings in 1963-----	3037
Ward, David J., evolutionary aspects of certain morphological characters in World Collection of Barleys-----	7583
Ward, F. N., analytical methods used in geochemical exploration by Geological Survey-----	2343
Ward, Joe H., jr., teaching digital computer to assist in making decisions-----	11512
Ward, Joseph: statue-----	
acceptance, print proceedings, report-----	9873
place in Statuary Hall, reports-----	8077, 9872, 13530
Ward, Rachel B., photography, PACAF basic bibliography-----	5881
Ward, Ray, background material on economic aspects of military procurement and supply-----	7829
Ward, Warren G., relief-----	13511
Ware, George M., static stability, etc., of lenticular reentry configuration-----	11009
Ware, Glen C., electrodeposition of zinc-----	19871
Wareham, Mass.: hurricane survey, engineer report-----	2226
departmental edition-----	1991
document edition-----	
Warehouse examiners, examination announcement, amendment-----	16939
Warehouses: grading wool, reducing costs-----	1707
operations under 1959 and 1960 cotton purchase programs, Commodity Credit Corporation, GAO review-----	5010
refrigerated, directory-----	16623
supply warehousing-inspection air-men career ladder, occupational survey-----	1773
tobacco, insecticide sprays, oil base specifications-----	7533
Warfare, see Air warfare-Atomic warfare-Guerilla warfare-Psychological warfare-War.	
Warfield, Richard M., North Atlantic region air traffic survey, 1962-----	9455
Warfield, Robert S., Beluga River coalfield, Alaska-----	19857
Warmbrod, John D., transient heating and melting process of glass shields at stagnation point of re-entering ICBM-----	11037
Warneck, P.: NO, in Martian atmosphere-----	18119
ultraviolet absorption of SO <sub>2</sub> dissociation energies of SO <sub>2</sub> and SO-----	19890
Warner, S. E., seismic velocity study-----	11580
Warrant officers, see Coast Guard Reserve.	
Warren, K. A., tensile, etc., properties of materials from 20 to 300° K-----	14598
Warren, R. W.: fluid amplifications, basic principles-----	11197
fluid flip flops and counter-----	16472
Warships, naval fighting ships, dictionary-----	16453, 18218
Wart, Robert L., geology and groundwater resources of Dougherty County, Ga-----	12232
Washchek, Jack N., water supply outlook and Federal-State-private cooperative snow surveys-----	3336, 4285
Washington, George, 5-cent stamp, in sheet, coil, and booklet form (poster)-----	1386
Washington, D.C., see Capital of United States-District of Columbia.	
Washington Airports Board, establish, hearings-----	15320
Washington Channel: waterfront, urban renewal in D.C.-hearings-----	11890
report-----	2037
Washington County, Md., soil survey-----	13055
Washington, Fort, general information-----	5637
Washington International Airport, see Dulles International Airport.	



# JANUARY-DECEMBER

	Entry
Washington Monument: flags surrounding, ceremonies in connection with raising and lowering— hearings— report—	13640 13601
Washington National Airport: annual report, 1962— audit report, fiscal years 1959-61— operation, transfer responsibility, hearings—	9218 10258 15320
Washington State: annual survey of manufactures, 1961, standard metropolitan statistical areas, and large in- dustrial counties, statistics— climatological data— coast pilot, supplement— county business patterns, activities covered by OASDI program— eastern, pea aphid, ecology in Blue Mountain area— fish hatcheries, mycobacteria in re- turning salmonid fishes— landings, fish and shellfish— annual summary, 1961— annual summary, 1962— log production, 1961— mineral industry, minerals year- book chapter— northeastern— dwarf mistletoe survey— forest statistics— population, 1960, characteristics— precipitation data, hourly— public school finance program, 1962-63— water supply outlook and snow sur- veys— women workers, 1960— ZIP code directory—	5989 3517 6038 15055, 18678 18445 19244 542 20684 17503 1224 10213 15586 13279 3771 10078 4291 14811 20071
Wasilewski, P. J., magnetic results, Antarctic peninsula traverse, 1961-62—	18958
Wasko, Robert A., heat transfer to sphere with retrorocket ex- hausting into free stream—	1310
Wasps: how to control them, etc.— spider, genus <i>Auplopus</i> , new spe- cies—	18429 9234
Wasserbauer, Joseph F., afterburning ramjet using gaseous hydrogen as fuel—	3106
Wasserman, Aaron E.: fluffed market products, new use for maple syrup— microbiology and sanitation in sug- ar bush and sugarhouse—	1640 13404
Wasserman, M. S., solid-state self- scanning display device—	18497
Wasson, James A., hydraulic fractur- ing in recovery of oil by water- flooding—	12827
Wasson, P. A., anionic flotation of sil- ica, etc.—	9128
Waste disposal, <i>see</i> Radioactive waste disposal — Sewage — Waste products.	
Waste disposal tanks, system for small groups, Arctic area, re- mote Air Force sites—	18472
Waste products: disposal— Alaska, Air Force remote sites— fruit processing industry— sanitary and industrial waste sewers, engineering manual, change— system for small groups, Arctic area, remote Air Force sites—	13207 1410 427 18472

	Entry
Waste products—Continued industrial waste— guide series— stabilization ponds for treat- ment, inventory and reference material— waste treatment processes, ad- vanced, preliminary appraisal— municipal treatment works con- struction cost trends— pollution treatment works, con- struction by small business concerns, assistance, hearings— <i>see also</i> Destroyers (warships). poultry processing industry, treat- ment studies— uranium milling industry, waste guide— uranium mills, characteristics— water, advanced treatment re- search, summary report— <i>see also</i> Refuse.	1410 16527 11245 20111 13824 16530 9350 9351 16531
Waste storage tanks, <i>see</i> Waste dis- posal tanks.	
Waste treatment studies (series)—	16523, 16527, 16530
Watch for new plant pests (series):	14884-887
Watches, <i>see</i> Clocks and watches.	
Water: actinomycetes related to supplies, isolation and enumeration— Alabama, layman's look— Alaska, supply problems at remote Air Force sites— algae and metropolitan wastes, seminar transactions— AMF on-power refueling system for Douglas Point Plant, compo- nent feasibility test— announcement of water-resources reports— Arizona, hydrologic data for San Simon Basin— availability and future manage- ment (remarks)— beta activity, determination— bond sales, 1962— Brazil, algae and water supplies in São Paulo area— Brazil, ground-water provinces— British Guiana, coastal artesian ba- sin, ground-water conditions— career opportunities in water sup- ply and pollution control— chemical quality in— Bear River Valley— Frenchman Creek basin— chemistry of— manganese in natural water (se- ries)— strontium in natural water (se- ries)— clean water is everybody's business and need— Columbia River basin— discharge at gaging stations, etc.— storage in major power reser- voirs, monthly report— conservation— abstracts of material published— index— benefit to wildlife— Communist China— conservation report WC (series)— research in Great Plains States— research in Pacific Northwest— through reuse of flushing fluid in aerobic sewage treatment proc- ess—	16532 10301 13207 16524 120 3455 10299 10313 8357 11248 16528 614 15619 1402, 9336, 18283 8343 15615 8354 5029 7398 4212 4212 5791, 18396 5790 2850 18299 4366 16750 1757

# INDEX 1963

	Entry		Entry
Water—Continued		Water—Continued	
conservation—Continued		ground water—Continued	
Yellow River middle loess region—		Gila Bend Indian Reservation, Maricopa County, Ariz.-----	6567
Communist China handbook-----	14212	Grand Prairie region, Ark., artificial recharge-----	10298, 14032, 20740
relation of erosion in gully drainage systems, Communist Chinese study-----	6695	Grayson County, Tex.-----	10300
contaminants, radiological, biological and chemical, methods for removal-----	16520	Greybull River, Dry Creek area, Hale County, Tex.-----	8345
cost of converting brush cover to grass for increased water yield in watersheds-----	17482	Halma Lake-Bronson area, Minn., exploration and test pumping-----	14033
damage to records, salvaging and restoring-----	10272	Hays County, Tex.-----	14030
delivery to lands in 3d division, Riverton project-----		Hualapai Indian Reservation, development-----	5033
law-----	9506	hydraulics (series)-----	2353, 19322
reports-----	7923, 8063	Karnes County, Tex., geology-----	8340
determining consumptive use and irrigation requirements-----	46	Kings River Valley alluvium, Humboldt County, Nev.-----	8348
distribution systems, design, engineering manual-----	6369	Lake Dakota plain area, S. Dak.-----	8342
drinking, quality of interstate carrier supplies, 1960-61-----	16494	Lake Mead Base, Las Vegas Valley, Nev. vicinity-----	19328
drinking water standards-----	3296	levels in Northwestern States, 1956-60-----	17533
emergency construction, engineering and design manual-----	12090	levels in Southwestern States, 1956-60-----	17534
experiments in water spreading at Newark, Del.-----	612	Louisville area, Ky., progress report-----	15616
Federal resources research activities, report-----	8116	Lyman-Mountain View area, Wyo.-----	20744
Federal-State-private cooperative snow surveys-----		Maynard, Mass., geology and hydrology of area-----	2354
Colorado and Wyoming-----	11288	Mississippian Plateau region of Kentucky, reconnaissance-----	12233
Nevada, summary, 1910-61-----	1502	Montauk Point area, N.Y., availability of fresh water-----	14031
flow through salmon spawning riffle, southeastern Alaska-----	6463	movements and bank storage due to flood stages in surface streams-----	19322
fluoride drinking waters index-----	7514	occurrence in area of discontinuous permafrost-----	8344
ground water-----		Point Arguello Naval Missile Facility-----	6565
Al Marj area, Cyrenaica, United Kingdom of Libya, explorations-----	14037	Prineville area, Oreg.-----	8349
Alma area, Mich.-----	20741	Pullman area, Whitman County, Wash.-----	8353
American Samoa-----	17530	Raft River Basin, Idaho, irrigation use, 1956-60-----	14034
Argonne National Laboratory, Ill., 1948-60-----	19327	role in national water situation-----	17535
artificial recharge (series)-----	612	Scottsville area, Ky.-----	10296
artificial recharge, Grand Prairie region, Ark. (series)-----	10298, 14032, 20740	southern Nassau and southeastern Queens Counties, Long Island, N.Y.-----	12234
Bartow County, Ga.-----	19326	Southold, N.Y.-----	20742
Bear River Valley, Wyo.-----	8343	west-side business district of Portland, Oreg., problems of utilizing-----	5038
Bexar County, Tex.-----	14029	Winkler County, Tex.-----	5034
Bryce Canyon National Park area, Utah-----	5027	Hawaii, storage capacities of soil under different land uses-----	17484
Bunker Hill Air Force Base and vicinity, Peru, Ind., geology and hydrology-----	19323	Honey Lake Valley, Calif.-----	8350
coastal dune area near Florence, Oreg.-----	5031	Indian reservations (series)-----	5033
coastal sand-dune area north of Coos Bay-----	2356	Indian reservations, Papago Tribe, (series)-----	6567
contamination and legal controls, Michigan-----	19331	industrial wastes treatment, use of stabilization ponds, bibliography-----	16527
contamination, symposium proceedings, 1961-----	16525	infiltration, field method of measurement-----	6564
Cow Valley, Malheur County, Oreg.-----	613	injection, effects on oil recovery in Cooke and Grayson Counties, Tex.-----	9135
development effects on depletion of Pecos River-----	5037	inland waters, USSR study-----	19465
dispersion through heterogeneous materials-----	10288	intake by soil, experiments for high school students-----	14877
Dougherty County, Ga., resources-----	12232	intergovernmental responsibilities in metropolitan areas-----	4327
Edwards County, Tex., geology-----	12235	ions common to, effect on flotation of limestone-----	9121
Elizabethton, Johnson City area, Tenn.-----	5025	irrigation, distribution, control and measurement on farm-----	13178
Fairbanks area, Alaska-----	8344	land and water conservation fund, establish, hearings-----	8117, 13655, 15338
Fairfax quadrangle, Va.-----	609	lower Colorado River, watershed conditions affecting-----	3825
Fernley-Wadsworth area, Nev.-----	8351		
Frenchman Creek basin, geology-----	15615		
general techniques (series)-----	5032, 6564, 14028		

	Entry
Water—Continued	
management effects, consumptive use, and nitrogen fertilization of irrigated winter wheat in western Kansas.....	16759
minerals yearbook chapter.....	20974
mountain resources, Forest Service research.....	14895
municipal, etc., contracts under reclamation project act, renewal—	
law.....	13418
reports.....	6164, 11984
municipal facilities inventory, statistical summary.....	18293
municipal water facilities, communities of 25,000 population and over, statistical summary, 1960.....	5697
Nevada, fall summary, 1963.....	21115
Nevada Test Site, water wells in Frenchman and Yucca valleys, report.....	130
nursing homes, environmental health factors.....	13002, 13004
occurrence and distribution of strontium.....	5029
organisms, abiotic and biotic factors significance during acclimatization, USSR study.....	14154
Otero and Crowley Counties, Colo., soft-water supplies in Dakota, etc., formations.....	17532
outlook—	
Arizona.....	4284
Colorado and New Mexico.....	4285
Colorado, early season snow report.....	3336
Colorado, Rio Grande, Platte and Arkansas River drainage basins.....	4285
Columbia basin.....	4286
Idaho.....	9391
Lake Mead.....	3825
Montana and northern Wyoming.....	4287
Nevada.....	4288
Oregon.....	4289
Utah, Bear and Colorado River basins.....	4290
Washington State.....	4291
western United States, including Columbia River drainage in Canada.....	9392
Wyoming.....	4292
Pacific Northwest—	
annual peak discharge at selected gaging stations 1962-63.....	17520
current discharge at selected stations.....	4212
month-end storage in major reservoirs.....	4212
water resources summaries.....	4001, 20731
water resources, weekly report.....	4002
papers prepared for United Nations Conference.....	5094
partial cold water immersion, effects on man in Arctic.....	18483
Pecos River Basin, reduce nonbeneficial consumptive use—	
hearing.....	13813
report.....	19033
plumbing cross-connections, hazards.....	14678
Potomac River basin needs, public understanding, summary.....	6375
protection for use after nuclear attack.....	10139
public utilities, adequacy, 1959.....	13257
quality, national network.....	21091
radioactivity—	
measurement in Czechoslovakia compared with other countries.....	8750

	Entry
Water—Continued	
radioactivity—Continued	
peacetime detection and control.....	7523
radioactive sewage, utilizing for field irrigation, USSR study.....	17813
radiochemical analysis of water (series).....	8357
radionuclides, maximum permissible concentrations for occupational exposure.....	18185
rare and trace elements, determination.....	18510
relation of salt water to fresh ground water (series).....	12234
requirements—	
and uses in Arizona mineral industries.....	12824
selected industries (series).....	12231
styrene, butadiene and synthetic-rubber industries.....	12231
resources—	
and pollution control.....	618
development in lower Colorado River Basin, future plans.....	8000
development in United States, map.....	14027
development, river basin planning seminar, May 27-31, 1963.....	20651
industrial areas (series).....	5030
Mississippi embayment project.....	12226
planning act of 1963, hearings.....	19061
planning, financial assistance, hearings.....	19061
Red River Parish, La.....	5036
research, reports of Federal Depts., etc.....	15391
Santa Fe area, N. Mex.....	19321
techniques in investigations.....	19329
Tennessee Valley, nature's constant gift.....	14746
Utica-Rome area, N.Y.....	5030
Wisconsin.....	10294
resources development projects—	
budget, 1964, decrease.....	13459
planning policy, hearings.....	13653
resources research act, establish centers, etc.—	
hearings.....	8121, 17170, 20499
report.....	8068
river basin planning act of 1964, hearings.....	19061
safety program, Operation Waterproof 4th grade, general information.....	16515
saline—	
ground water in Roswell Basin, Chaves and Eddy Counties, N. Mex., 1958-59.....	8341
resources, New Mexico.....	5035
saline conversion—	
absorption-multistage flash distillation process.....	20753
demineralization by pressurization cycles with ion exchange materials.....	14060
demineralization by transport depletion.....	20752
develop new source of fresh water.....	624
isotopes utilization as fuel.....	12246
low-cost development (remarks).....	10313
osmotic demineralization process, practicality.....	14057
polymer films to improve separation of water and salts.....	8369
report, 1962.....	12245
use of acoustic vibrations to improve heat transfer rates and reduce scaling in distillation units.....	625

# INDEX 1963

	Entry		Entry
<b>Water—Continued</b>		<b>Water birds—Continued</b>	
saline conversion demonstration plants—		population management, hearings—	15325
Freeport, Tex., report—	14058	population trends, hearings—	4757
large size—	14059	populations in Upper Chesapeake region—	15536
Roswell, N. Mex., dedication (remarks)—	14056	status report, 1962—	4971
San Diego, Calif.—	2369	utilization and hunting kill, 1946-60, Upper Mississippi River Wildlife and Fish Refuge, etc.—	15537
Webster, S. Dak.—	5049		
saline water research and development progress reports—	624-625, 5050, 6577-78, 8369, 12246, 14057-61, 19348, 20752-753.	<b>Water carriers:</b>	
San Pedro River, regimen of inner valley, pilot study—	15620	dual-rate contract agreements, authorize use by steamship conferences, extend law—	
Santa Fe River watershed, water yield—	10240	law—	7824
Springfield-Holyoke area, Mass., problems—	19330	report—	8047
steam-water flow, effect of heat addition in empirical correlation of void fractions—	1282	revenue and traffic, quarterly—	4151
stock-water development on public domain of western Utah, hydrology—	6561	ton-miles, 1961—	8198
stream-intragravel interchange in salmon spawning riffle—	4969	transport statistics, 1961—	641
subsurface, chemical composition, geochemistry data—	2349	<b>Water-film cooling of 80° total-angle cone at Mach number of 2 for airstream total temperatures up to 3,000°R—</b>	21000
supply and pollution control, bibliography—	14670	<b>Water fleas, reproduction as affected by concentration of bacteria—</b>	12720
surface water—		<b>Water heaters, nursing homes, environmental health factors—</b>	13005
Mariana, Caroline and Samoa Islands—	2357	<b>Water hemlock, livestock poisoning in Western States, reducing losses—</b>	14856
Pennsylvania, chemical quality—	6566	<b>Water levels:</b>	
quality determinations throughout U.S.—	3293, 20739, 20743	correlation of water-level fluctuations with climatic cycles in Oklahoma Panhandle—	8356
Sacramento River basin, chemical quality—	12236	ground, United States—	610, 17533-534
viscosity of monomolecular films at low film pressures, literature survey—	12949	observation wells in Santa Barbara County, Calif.—	19320
tamarisk removal reduces water-table fluctuations in central Arizona—	4983	<b>Water oak, see Oak.</b>	
temperature studies for 1958, Middle Snake River drainage—	8284	<b>Water plants, see Aquatic plants.</b>	
treatment, biological references—	20110	<b>Water pollution:</b>	
underground, as source of life, USSR study—	17936	biological problems, transactions of 1959 seminar—	16521
use and energy balance—	7548	career opportunities in pollution control—	9336, 18283
USSR, improvements and methods of furthering improvements—	2566	career opportunities in water supply and pollution control (panel presentation)—	1402
waste treatment processes—		control act, amend, hearings—	13824
advanced, preliminary appraisal, renovate for direct and deliberate use—	11243	control, biological references—	20110
research summary report, June 1960-Dec. 1961—	16531	Federal control programs helps fight for clean water—	7398
water and related land resources, Gunnison River Basin, Colo.—	13193	fish kills, 1962—	11244
water resources review, monthly—	4283	ground water pollution, symposium—	16525
water supply afloat, naval preventive medicine manual—	9097	higher water plants as related to polluted continental bodies of water, USSR study—	12341
water supply ashore, naval preventive medicine manual—	19819	national water quality network—	21091
water supply papers—	609-614, 2352-57, 5025-38, 6561-69, 8340-57, 10295-301, 12231-236, 14028-37, 15615-620, 17530-535, 19321-322, 20739-744.	President's Water Pollution Control Advisory Board, functions and responsibilities—	1428
waterdrop apparatus—	1719	research for clean water—	16529
well drilling, machinery and equipment industry trends—	150	rising tide of trouble—	11249
western U.S., fall water supply summary, 1963—	20138	seas, by oil, international convention for prevention—	
what can you do for clean water—	16539	report—	20540
see also Natural resources—Sea water—Springs—also headings beginning Water.		text—	8025, 20517
		steckening story—	11246
<b>Water birds:</b>		State and interstate control administrators, joint meeting with State sanitary engineers—	1430
hunting, etc., regulations, Federal, 1963-64—	15535, 17461	water resources and pollution control—	618
identification guide—	17451	what you can do for clean water—	12985
		<b>Water power:</b>	
		production of mineral fuels and hydropower in U.S. since 1800—	7211
		publications, price list—	3263, 18277
		resources—	
		Trask River basin, Ore.—	17531
		United States (series)—	17531
		sites, Trask River basin, Ore., geology—	17531

# JANUARY-DECEMBER

Entry	Entry	Entry
5325 4757	Water purification, equipment, Federal item identification guides for supply cataloging, supplements-----	3655
5536 4971	Water repellent compounds, improve performance of drop siding-----	19265
5537	Water Resources Council, establish, hearings-----	19061
7824 8047 4151 8198 641	Water rights: Arizona v. California, et al., controversy, opinion of Supreme Court----- State laws and related subjects, bibliography----- Water supply, see Water. Water systems: construction, contracts awards----- energy loss at sharp-edged pipe junctions----- national network annual compilation of data on surface water quality determinations throughout U.S.-----	11920 1715 13026 16766 3293
1000 2720	Water vapor: infrared radiation absorption, USSR study----- stratosphere, USSR translation----- vertical distribution over Hyderabad, India, and comparison with mid-latitude distribution-----	19545 16262 12951
14856	Waterborne commerce, see Commerce. Waterborne foreign trade statistics-----	4267
8356 3-534	Waterbury, Conn.: occupational wage survey----- departmental edition----- document edition-----	12796 11740
16521	Watercraft, see Ships. Waterfloodng, see Petroleum. Waterfowl, see Ducks—Water birds. Waterfowl Management Area, John Day, see John Day Waterfowl Management Area.	
18283	Waterloo, Iowa: occupational wage survey----- departmental edition----- document edition-----	5447 4703
1402 13824 20110	Waterproofing soils, laboratory studies of materials-----	17413
7398 11244	Watersheds: brush cover, cost of converting to grass for increased water yield-----	17482
16525	Fraser Experimental Forest, research-----	14895
12341 21091	geology, relationship to beach radioactivity----- Hawaiian wildlands, management research, program-----	19132 12164
1428 16529 11249	mud and rock slide on experimental tract, case history----- Norris, Tenn., multiple use watershed management, objectives-----	12180 7473 14745
20540 20517 11246	North Sanpete project, proposal, hearing----- precipitation measurement on forested experimental areas----- project structures, hearing----- projects development, miscellaneous, hearings-----	13822 20699 12005 302
1430	protection and flood prevention act, amend to increase capacity of flood-detection structures, hearing-----	12005 10240
618 12985	Santa Fe River, water yield, study----- SCS program, speed up under Public works acceleration act----- small projects----- how local people participate in SCS program----- plans, financing, etc----- Western States, hydrology-----	14882 12050 2352
	Watersheds—Continued West Virginia mountains, four forest practices, effect on stream-flow----- see also names of rivers, etc. Waterstops, nonmetallic, laboratory and field exposure tests----- Waterton-Glacier International Peace Park, see Glacier National Park. Watertown Arsenal Laboratories, technical reports----- Watervliet Arsenal, technical reports----- Waterways, permits for work in navigable waters----- see also Inland waterways. Waterways Experiment Station: contract report----- miscellaneous paper----- publications, list----- technical memorandums----- technical reports----- 2227-31, 4874-75, 6378, 10091-93, 13886-890, 15457-460, 17413-414, 19152.	10238 13889 9317-18 4867 19151 13883 6868 13884-885 466, 15457-460, 19152.
	Watkins, F. A., Jr., ground-water geology, etc., Bunker Hill Air Force Base and vicinity, Peru, Ind-----	19323
	Watson, Charles W., Jr., relief-----	7895
	Watson, Donald A., insurance management in small retail firms-----	1481
	Watson, Earnest C., organization of scientific activities in India-----	3193
	Watt, Bernice K., paper, Feb. 6, 1961-----	1645
	Watt, Lois B.: classification scheme for elementary and secondary school textbooks----- classing curriculum guides and related publications----- Eastern Europe, Educational Materials Laboratory, report----- Educational Materials Laboratory, Office of Education----- periodicals related to international understanding----- seasons and holidays----- United Nations, Educational Materials Laboratory report----- Western Europe, Educational Materials Laboratory report-----	12060 8171 15429 19097 374, 10069 12059 4813 12061
	Wattmeters, see Electric meters. Watts, C. B., marginal zone of moon-----	19087
	Waubay National Wildlife Refuge, birds-----	17457
	Waugh, Frederick V., agricultural outlook for 1963 and next 5 years-----	2121
	Waukegan, Ill., railroad accident-----	12266
	Waukegan Port District, Ill., conveyance of real property to, report-----	18907
	Waurika, Okla., dam construction, hearings-----	13667
	Waurika Reservoir, Okla.: flood control, engineer report----- departmental edition----- document edition-----	19153 18965
	Wave meters, see Wavemeters. Wave numbers, calculations using tables of blackbody radiation function, research report-----	1739
	Waveguides: directional couplers, H & X band 0 to 30 db coupling, technical manual, Navy calibration program----- ferrite-loaded open transmission line-----	20006 18231



# INDEX 1963

Entry	Entry
<b>Waveguides—Continued</b>	<b>Weapons—Continued</b>
systems with long electron flows, nonlinear effects and parametric regeneration during interaction of waves, USSR study-----	missile and space-----
10752	defense against, USSR translation-----
<b>Wavelengths, spectral, color discrimination, psychophysical methods and sensitivity as function of determining-----</b>	reliability, military-industry symposium, papers-----
9105	naval, reliability engineering and testing-----
see also Spectra.	9280
<b>Wavemeters:</b>	nuclear-----
test set, TS-117/GP, Navy calibration program, technical manual-----	accident hazards, precautions and procedures, technical information bulletin-----
9298	7720
wave and power meter set, TS- 107A/TPM-1, Navy calibration program technical manual-----	bomb effects computer, including slide-rule design and curve fits for weapons effects-----
9294	5929
<b>Waves:</b>	design of structures to resist effects, engineering and design manual, change-----
characteristics in inland reservoirs, conoidal, solitary and Stokes, limiting heights-----	6370
19130	18716
detonations-----	effects on houses, reducing-----
formation in variable geometry tubes, experimental and theoretical studies-----	employment, staff officers field manual-----
12887	7667, 11533
IBM 704 or 7090 computer program for computation, errata-----	10147
7247	French armaments, scientific and economic aspects-----
nonlinear water, higher approximation -----	19752
19130	Israel Communist press comments-----
nuclear detonations, electron density, profiles of wavemotions in ionosphere-----	825
13198	risk and security (address)-----
ocean, and microseisms, spectra as related to storms at sea-----	4441
11164	testing-----
wave action and breakwater location, Superior entry, Duluth-Superior Harbor, Superior, Wis., hydraulic model tests-----	discontinuance, Geneva Conference, guide-----
4874	3341
see also Electric waves—Ocean radio waves—Shock waves sound—Standing wave ratio.	fallout from tests, U.S. through 1962, estimates and evaluation-----
<b>Waxes:</b>	13924
Federal item identification guides for supply cataloging, supplements-----	health endangered by radiation-----
3657	10137
Federal supply catalog— identification list-----	Japan Socialism Reform Movement Preparatory Council comments-----
19076	1038
management data list-----	statement by Adlai E. Stevenson, Oct. 10, 1962-----
19077	1795
Way to Job in Government-----	technical capabilities for detecting and identifying, hearings-----
4629	9812
Wayne County, Tenn., forest inventory statistics-----	349
3379	nuclear test ban negotiations— and disarmament, hearing-----
Wayne County, Utah, geology of Capitol Reef area-----	8110
20732	questions and answers-----
Ways and Means Committee, House: calendar-----	18938
3845	renewed at Geneva disarmament conference, hearings-----
committee prints-----	4777
309	nuclear test ban treaty— address by President Kennedy-----
2066, 4760, 15335-336	13232, 13234
hearings-----	17310
4761, 8015, 11915, 15337-338, 18962, 20507	print additional copies, reports-----
investigations and studies, expenses, report-----	17287, 18911
6317	16821
reports-----	18971
4739-48, 4750, 7971, 9890, 11831-832, 11849-851, 11868, 13547-551, 13556, 13564-565, 13580, 15272, 15275, 17144, 20470, 20478	why, U.S. policy statements, etc-----
<b>We know so shamefully little about the moon-----</b>	11530
16413	reliability, allocation and testing procedures-----
<b>Weapons:</b>	11471
aerospace surveillance, tactical decision- making for threat evaluation and action selection-----	rocket system mounted in HU-1B helicopter, flight test evaluation-----
11507	11482
Air Force system, reliability and maintainability techniques, category II/III test concepts-----	14903
16774	systems, integrated design for maintainability, Air Force guide-----
chemical and biological, defense against, East German instruction material-----	1767
705	thermonuclear, against growing threat of war, USSR study-----
design for maintainability-----	5238
11477	weapons officers, Navy, home study course-----
Federal item identification guides for supply cataloging, supplements-----	19997
3660	<b>Wear, Jerrold D., performance of single fuel-vaporizing combustor with 6 injectors adapted for gaseous hydrogen-----</b>
	10975
	<b>Weart, W. D., particle motion near nuclear detonation in halite-----</b>
	18585
	<b>Weather:</b>
	and surface radiation prediction for Project Sedan-----
	14994
	Arctic areas, weather effect on aircraft maintenance crews-----
	18482
	correlation with solar variation-----
	21108

# JANUARY-DECEMBER

Entry

19696

8141

9280

7720

5920

6370

18716

11533

10147

19752

825

4441

3341

13924

10137

1038

1795

9812

349

8110

18938

4777

13234

17310

18911

16821

18971

11530

11471

11482

14903

1767

5238

19997

10975

18585

14994

18482

21108

## Weather-Continued

engineering data, Army, Navy, and Air Force manual.....	16828
fatal general aviation accidents involving weather, study.....	16921
fire weather damage in California, 1961.....	6494
for aircrews, Air Force manual.....	52
indexes, agricultural, procedures for constructing.....	2125
information in relation to piloting of private aircraft.....	17426
maps.....	
daily weather map.....	3582
Northern Hemisphere, for IGY.....	20244
synoptic, Northern Hemisphere, daily bulletin.....	3580
mariner's weather log.....	3883
measuring effects on agricultural output.....	2125
modification report, 1962.....	
departmental edition.....	14618
document edition.....	13467
numerical prediction lectures.....	1733
phenomena observations from outer space, report.....	287
publications, price list.....	3264
radio aids, Atlantic and Mediterranean area.....	21054
review, monthly.....	3929
satellites and rockets, USSR study.....	10583
service A schedules, ATS manual, changes -- 5899, 13228, 14925, 18523-524.....	16809
service O International schedules, ATS handbook, change.....	89
service for pilots.....	1594
solving the problem, research on understanding the atmosphere.....	21177
space, effect on manned spaceflight.....	19947
tests of YUH-1D helicopter.....	16767
Thailand, environmental factor in ground mobility.....	13888
weather and crop bulletin.....	4302
see also Climate-Meteorology.	
Weather Bureau:	
circulars -- 3398, 5769, 13114-115.....	20232
climatic data, published sources, guide.....	20245
precipitation measurements, history.....	7516
press releases.....	4102
research paper.....	20246
research progress and plans, 1962.....	3401
summer student trainee report, 1962.....	16891
technical papers..... 1593, 5771, 14802.....	13131, 16692
toward understanding the atmosphere, research.....	21177
wind measurements, history.....	16668
Weather control:	
cloud seeding in Black Hills, 1961.....	2105
hall cloud seeding, Soviet research, translation.....	17807
Weather forecasts:	
average, résumé and outlook, monthly.....	3473
coastal warning facilities charts-- Cape Hatteras, N.C., to Brunswick, Ga.....	11382
Eastport, Maine to Montauk Point, N.Y., 1963.....	14776
Manasquan, N.J. to Cape Hatteras, N.C. and Chesapeake Bay, 1963.....	11384
Morgan City, La. to Apalachicola, Fla., 1963.....	5770
Morgan City, La. to Brownsville, Tex., 1963.....	14777
Point Conception, Calif., to Mexican border, 1963.....	9491
Puerto Rico and Virgin Islands, 1963.....	11385

Entry

## Weather forecasts-Continued

fog, atmospheric electricity measurements.....	11175
small craft, gale and whole gale warning facilities charts-- Great Lakes, Huron, Erie and Ontario, 1963.....	13129
Great Lakes, Superior and Michigan, 1963.....	13130
Weather stations:	
agreements with--	
Dominican Republic.....	5730
Mexico.....	13087
decadal census--	
Arkansas.....	16669
Iowa.....	16670
Kansas.....	16671
Louisiana.....	16672
Maryland and Delaware.....	16673
Missouri.....	16674
Montana.....	16675
New Jersey.....	16676
New Mexico.....	16677
New York State.....	16678
North Carolina.....	16679
North Dakota.....	16680
Ohio.....	16681
Pennsylvania.....	16682
South Carolina.....	16683
South Dakota.....	16684
Tennessee.....	16685
Utah.....	16686
Virginia.....	16687
West Virginia.....	16688
Wisconsin.....	16689
Wyoming.....	16690
index.....	16452
north Atlantic Ocean agreement, amendment.....	9433
telemetering systems, problems.....	20001
Weaver, George L-P:	
address, Oct. 23, 1963.....	19777
brief outline of operating programs of International Labor Affairs Bureau of Labor Department.....	17567
Weaver, H. F., national first-aid and mine rescue contest, Charleston, W. Va., Oct. 2-4, 1961.....	1203
Weaver, L. K., oil recovery by miscible-phase displacement, bibliography.....	12828
Weaver, Robert C., lecture, Feb. 8, 1963.....	5042
Weaver, Robert L., meteorology of hydrologically critical storms in California.....	7515
Weaver, William L., tables for integral of circular bivariate normal frequency function.....	14562
Webb, James E., remarks, June 9, 1963.....	12888
Webb, Tarvin F., reducing costs of grading wool in warehouses.....	1707
Webbert, Virginia:	
economic developments in Indonesia, 1962.....	8404
licensing and exchange controls of Indonesia.....	5076
Weber, Dean, United States censuses of population and housing 1960, enumeration time and cost study.....	16909
Weber, George H., changing programs in institutions for delinquent children.....	1928
Weber, Lila E., relief.....	20570
Webster, S. Dak., saline water conversion demonstration plant.....	5049
Weeds:	
control--	
ditchbank weeds on irrigation systems.....	40
with herbicides.....	18427
seeds, identification.....	9561, 20277

Entry

# INDEX 1963

Entry	Entry
Weekly:	Weiss, Volker, stress gradient and stress biaxiality effect on behavior of materials.----- 7602
NOTE:—For all publications which begin with the word "Weekly" see subject, or name of department, etc., issuing publication.	Weissbrodt, Sylvia R., State legislation enacted in 1962.----- 3040
Weeks, see names of special weeks.	Weist, William G., jr., water in Dakota and Purgatoire formations in Otero County and southern part of Crowley County, Colo.----- 17532
Weevils:	Weitzman, Sidney, forest soil freezing and influence of management practices, northern Minnesota.----- 12187
boll weevil control, community effort.----- 4338	Welbourne, Jerry L., suitability of tubed foods for in-flight feeding.----- 4394
genus <i>Maemactes</i> .----- 9236	Weld, Betsy A., reports and maps of Geological Survey, released only in open files, 1962, list.----- 19302
Wehrend, William R., jr., aerodynamic damping moments of cones with different centers of rotation.----- 7292A	Welding:
Weibull, Waloddi, algebra of stochastic quantities.----- 20300	AEC forum, papers.----- 135
Weighing instruments, see Scales (weighing instruments).	bibliography.----- 7738
Weightlessness:	cold, plastic metals, USSR study.----- 10804
effect of surface energy on liquid-vapor interface configuration.----- 5590	columbium alloys.----- 5850
liquid hydrogen under zero gravity conditions.----- 11013	diffusion, USSR conference.----- 2756
liquid vapor interface configuration, effect of contact angle and tank geometry.----- 21004	electron beams—
muscle tonus under conditions of intermittent action.----- 7298	and electrosiag refining role in special weldments, USSR study.----- 8849
postural reflexes in intact animals.----- 7297	for fabrication of ultra high strength steel rocket motor cases, evaluation.----- 9277
sensitivity to stimulation of semicircular canals.----- 7636	industrial potential, etc.----- 5983
USSR study.----- 15979	techniques.----- 11199
Weights and measures:	electrosiag applications, USSR study.----- 20777
accurate weights and correct scales for livestock producers.----- 1614	explosion welding, theory of cumulative processes.----- 7299
commercial, specifications, tolerances, and regulations.----- 18184	heat-affected zones in titanium-6Al-6V-2Sn alloy, study.----- 9318
net-weight determinations for frozen glazed halibut steaks, accuracy and simplification of method.----- 4947	marine engineering regulations.----- 13336
precision measurements and calibration standards, selected papers, errata.----- 9201	metal powders.----- 8824
see also Volumetric apparatus.	minutes of annual AEC conference, 1960.----- 15005
Weinberg, Edgar:	sintered aluminum powder, USSR study.----- 8546
impact of technological change and automation in pulp and paper industry.----- 1177	techniques, selected.----- 10959
industrial retraining programs for technological change, study of performance of older workers.----- 14475	USSR—
Weinberg, Langston W., crash injury evaluation, test of seat installation in H-21 helicopter.----- 18351	prospects for development.----- 16056
Weiner, Jack, highlights of developments in mental health programs, 1962.----- 10965	translations.----- 14117
Weinles, Martin M.:	vacuum diffusion, USSR scientific-technical conference summary.----- 8677
occupational wage surveys—	Weldon, N.C., motor carrier accident.----- 15659
Allentown - Bethlehem - Easton, Pa.-N.J.----- 10907	Welfare Administration:
Buffalo, N.Y.----- 9057	contribution to international cooperation for social development.----- 20250
Weinsten, Herbert, numerical solution of problem of mixing of laminar coaxial streams of greatly different densities, isothermal case.----- 7251	what it is, what it does.----- 13132
Weinstein, Irving, heat transfer and pressure distributions on hemisphere-cylinder and bluff-afterbody model in methane-air combustion products and in air.----- 1299	Welfare funds:
Weirton, W. Va., motor carrier accident.----- 17569	welfare and pension benefit plans—
Weisenberger, B. C., soil survey of Bath County, Ky.----- 21116	financial data, 1959.----- 16271
Weiss, Leonard, address, Apr. 5, 1963.----- 16568	statistics, 1959-61.----- 18020
	statistics, 1960.----- 7140
	welfare and pension plans disclosure act—
	amendments 1962, legislative history.----- 5723
	bonding in excess of \$500,000.----- 10884
	Welfare in review (periodical).----- 18369
	Welfare work, see Public assistance—
	Social work and problems.
	Well drilling:
	increasing drilling depths, problem.----- 10862
	machinery, oil, gas, and water, industry trends.----- 150
	superdeep well, problems for study of structure of earth's crust in Azerbaydzhan, USSR study.----- 12354
	test, Bryce Canyon National Park.----- 5027
	Wellcome, Henry S., papers, Federal Records Center, Seattle, Wash., preliminary inventory.----- 7305

	Entry		Entry
	Weller, William W.:	West (U.S.):	
	low-temperature heat capacities and	agriculture, long-term production	
	entropies-----	prospects-----	13838
	magnesium metavanadate, etc....	floods, Dec. 1955-Jan. 1956 in far	
	monomolybdates of sodium, mag-	western States-----	6568, 15618
	nesium, and calcium-----	fresh fruit and vegetable unloads	
	muscovite-----	in western cities by commodi-	
	sesquioxides of scandium, etc....	ties, States, etc-----	14818, 20259
	sodium dimolybdate and sodium	growing Russian wildrye in West-	
	ditungstate-----	ern States-----	18430
	Wells, A. A., remarks, May 4, 1963--	hydrology, small watersheds in	
	Wells, Claude V., relief-----	Western States-----	2352
	11943, 18393	improving mountain meadow pro-	
	Wells, J. Robert, spectrochemical	duction-----	1685
	analysis of high-purity tita-	instrument approach procedure	
	nium-----	charts and airport obstruction	
	1244	charts, dates of latest prints--	3588
	Wells, Jean A.:	livestock ranches, costs and re-	
	address, May 21, 1963-----	turns, 1962-----	15412
	economic indicators relating to	orchard and vineyard land use,	
	equal pay, 1963-----	problems and conservation	
	women in Federal service-----	treatment-----	11289
	Wells, Rollien R., review of metal-	plants poisonous to livestock, de-	
	lurgical technology-----	scription, etc-----	14856
	14525	rangelands, pellet seeding-----	11461
	Wells, William R.:	see the West reclaimed, films avail-	
	aerodynamic coefficients from New-	able for educational purposes--	18298
	tonian expressions for conic	timber, determination of allowable	
	and spheric bodies at combined	annual cut in national forests--	2310
	angles of attack and sideslip--	water supply, fall summary, 1963--	20138
	11089	water supply outlook and snow	
	influence of precession of earth ren-	surveys-----	9392
	dezvous orbits on lunar mission	western range and livestock report,	
	requirements-----	monthly-----	4303
	1304	western range and livestock, 17	
	Wells:	western States, 1922-62-----	9590
	artificial recharge of ground water,	West Carrollton, Ohio, railroad ac-	
	Grand Prairie region, Ark-----	cident-----	6636
	10298	West Coast Airlines, Inc., accident--	18710
	electric analog of 3-dimensional	West Germany, see Germany.	
	flow and its application to un-	West India:	
	confined aquifers-----	climatological data-----	3517
	2353	lights and fog signals, lists-----	3208, 9258
	electrical and radioactive well log-	5651, 9258	
	ging, application to ground-	sailing directions, change-----	2201
	water hydrology-----	West North Central States, see Cen-	
	14028	tral States.	
	observation wells, Santa Barbara	West Palm Beach, Fla., International	
	County, Calif., water levels-----	Airport, weather observations,	
	19320	hourly, decennial census-----	7507
	plutonium-beryllium neutron	West Palm Beach Canal:	
	sources for well logging, guide	flood control improvement, engineer	
	for preparation of license ap-	report-----	
	plications-----	departmental edition-----	2232
	15021	document edition-----	2079
	relief well systems, finite, design,	West Point, Ga.:	
	engineer manual-----	Chattahoochee River, engineer re-	
	12088	port-----	
	stilling, design for impact-type en-	departmental edition-----	2185
	ergy dissipator for storm-drain-	document edition-----	2000
	age outfalls, hydraulic model	West Point, N.Y., see Military Acad-	
	investigation-----	emy, West Point.	
	10091	West South Central States, see Cen-	
	water, in Frenchman and Yucca	tral States.	
	Valleys, Nevada Test Site, Geo-	West Virginia:	
	logical Survey, report-----	annual survey of manufactures,	
	130	1961, standard metropolitan	
	Welshans, L., ANPP code development	statistical areas, and large in-	
	program, experimental program	dustrial counties, statistics--	4568
	on water-moderated arrays	centennial celebration, United	
	of uranium and stainless	States participation, report--	6271
	steel-----	climatological data-----	3517
	126	county business patterns, activities	
	Welty, James R., thermodynamic	covered by OASDI program-----	15051
	properties of yttrium metal,	electric rate book-----	17434
	etc-----	field trial of tree injector for weed-	
	5482	ing-----	20701
	Wendel, George W., moisture fluctua-	5b redevelopment area, statistical	
	tions in pocosin vegetation-----	profile-----	13354
	10245	5-cent statehood commemorative	
	Wenden, Ariz., flotation and sinter-	stamp (poster)-----	11204
	ing studies on stockpiled man-	forestry research-----	15581
	ganese ores-----	mineral industry, minerals yearbook	
	1242	chapter-----	3070
	Wessel, F. W.:		
	columbium and tantalum-----		
	18069		
	minor metals-----		
	18082		
	zirconium and hafnium-----		
	16349		
	West, J. M.:		
	asbestos-----		
	18063		
	cement-----		
	19825		
	West, Margaret D., Federal support		
	of schools of public health-----		
	12992		
	West, W. W., analysis of polyphenyl		
	radiolysis products by gas		
	chromatography, etc-----		
	5948		

# INDEX 1963

Entry	Entry
<b>West Virginia—Continued</b>	<b>Whang, Shin Sook (Renee) :</b>
mountains, 4 forest practices, effect on streamflow.....	relief..... 17002, 17223
oilfields discovered before 1940.....	What consumers should know about cosmetics..... 17467
population, 1960, characteristics.....	What is a good nursery school..... 20646
precipitation data, hourly.....	What standards do we raise?..... 17383
public school finance program, 1962-63.....	What we get from trees..... 10252
sawmill residues and lumber for wood-using industries, raw materials survey.....	What you should know about exporting, how to get started hand-book..... 632, 6624
spoils banks, poor growth of poplar weather stations, decadal census.....	What you should know about John..... 1583
women, legal status.....	What's available in atomic energy literature..... 9686
ZIP code directory.....	What's happening in migrant education?..... 10084
West Waterford, N. Y., railroad accident.....	What's new about women workers? a few facts..... 11413
Western Electric Co., Inc., equipment rentals charged by subcontractor in construction of White Alice communications system, GAO examination.....	Wheat:
Western Europe, <i>see</i> Europe.	acreage allotments and price support (excerpts from talk)..... 16734
Western Hemisphere, <i>see</i> Hemisphere, Western.	American surplus commodities, sales to Soviet Union and Eastern Europe..... 18812
Western States, <i>see</i> West (U.S.).	carlot receipts, physical, chemical, etc., properties, 1961 crop..... 18376
Western Utilization Research and Development Division, publications and patents, semiannual list.....	classification of Triticum species and wheat varieties grown in U.S..... 11467
Western white pine, <i>see</i> Pine.	commercial farms, Pacific Northwest, Northern and Southern Plains, costs and returns, 1962..... 15413
Westfield, James, administration of Federal coal-mine safety act, 1952-62.....	durum, increase acreage allotments in Tularelake area, Calif.—law reports..... 15143
Westinghouse Electric Corporation: nuclear submarine components subcontract, GAO examination into pricing.....	Federal insurance program..... 13597
overcharges for propulsion machinery for U.S.S. Enterprise, GAO report.....	foreign trade prospects..... 39208
Westley, David E., economic developments in Iran, 1962.....	futures—
Weston County, Wyo.: geology of—	commitments of traders..... 2530
Inyan Kara Mountain quadrangle.....	trading and open contracts..... 3752
Newcastle area.....	growers' machinery costs, North Dakota..... 6315
Westworth, Edna C., impact of hospitalization costs on aged beneficiaries, etc.....	international agreement, 1959, ratification, report..... 20530
Wetherbee, D. K., some recent findings in inhibition of avian reproductivity.....	international agreement, 1962..... 1517
Wetmore, Joseph W., aircraft vortex wakes in relation to terminal operations.....	legislation, hearings..... 18916
Wetting agents, dynamics in brazing and soldering.....	new program (address)..... 1671
Wetzel County Hospital, relief.....	new programs, to achieve balance between production and demand, message from the President..... 4721
Weybrew, Benjamin B.: individual differences in energy discharge from frustration.....	pasture report, monthly..... 4304
relationship of breathholding ability, etc., to performance in pressure chamber, etc.....	program, 1964—
Whale, H. A.: excitation of electroacoustic waves by antennas in ionosphere.....	economic analysis..... 5847, 7585, 9593
impedance of electrically short antenna in ionosphere.....	small wheat grower, alternatives..... 7581
ion sheath effects near antennas radiating within ionosphere.....	proposed changes in grade standards..... 18380
Whales, humpback, feeding, periodicity, South Atlantic Ocean, USSR study.....	quality, sedimentation measure, 1962 crop..... 4363
<i>see also</i> Cetacea.	Red wheat, new canned cooked bulgur, market position, etc., in Wichita, Kans..... 4359
Whaling:	referendum—
international convention, amendments to schedule.....	effects on rural economy, etc. (address)..... 5811
international regulation, new treaties, etc., USSR articles.....	farmer's stake (address)..... 1696
Whaling Commission, <i>see</i> International Whaling Commission.	in United States (speech)..... 1722
	setting agricultural price in Common Market (speech)..... 1722
	situation, Government program, choices for 1964..... 10127
	stabilization program, 1962, statistical summary..... 16727
	U.S. exports under Government programs, 1961-62..... 4977
	utilization for food..... 15423
	wheat situation..... 4305
	winter, crop production, 1962..... 7459
	winter, water management, consumption use, and nitrogen fertilization in western Kansas..... 16759
	Wheat germ oil, effect on performance of swimming rats..... 7687



# JANUARY-DECEMBER

Entry

7223  
7467  
0646  
7383  
0252

6624

1583

9686

0084

1413

6734

8812

8376

1467

5413

5143

3597

3909

0208

2530

3752

6315

0530

1517

8916

1671

4721

4304

9593

7581

8380

4363

4359

5811

1696

1722

1722

0127

6727

4977

5423

4305

7459

6759

7687

Entry

Wheatgrasses:	
crested wheatgrass—	
in northern New Mexico, cattle	
gains and plant responses from	
spring grazing—	16758
lambling range, activities of	
sheep—	4985
Wheaton, Ill., population, special cen-	
sus—	15075
Wheatstone bridge, see Electric	
bridges.	
Wheeler, Louis C., relief—	13515
Whelan, James A., laboratory studies	
of variables in rotary drilling—	3087
When you work in United States—	11282
Whetstone River:	
flood control, engineer report—	
departmental edition—	2180
document edition—	2004
Whetten, Nathan L., presentation on	
Mexican population trends—	11909
Whieldon, Charles E., jr., West Vir-	
ginia oilfields discovered before	
1940—	7203
Whiskers:	
alumina, growth and analysis—	7591
fracture, of lithium fluoride,	
strength dependent on size,	
USSR study—	6607
Whiskey:	
bourbon, designate as distinctive	
product of U.S., reports—	4748
except Irish, Scotch, etc., Tariff	
Commission report—	11347
Whistler Peacock Room in Freer Gal-	
lery of Art, description—	4993
White, Billy L., temperature evalua-	
tion of YHU-1D helicopter in	
Climatic Laboratory—	11476
White, Donald E.:	
chemical composition of subsurface	
waters—	2349
volcanic emanations, data of geo-	
chemistry—	8339
White, E. M., soil survey of Hand	
County, S. Dak—	13052
White, Elliot J., physical properties	
and clay mineral contents af-	
fecting susceptibility of oil	
sands to water damage, Powder	
River Basin, Wyo—	1233
White, Gladys O.:	
improving home and family living	
among low-income families—	10304
yardstick for need—	17415
White, Harold D., improved methods	
for eviscerating chickens—	5782
White, Jack A.:	
abort from manned lunar landing	
and return to rendezvous in	
50-mile orbit—	1306
deadband about desired perigee of	
space vehicle approaching	
earth—	5597
White, Mrs. Jesse F., relief—	9843,
18995,	20407
White, Leslie A., Pueblo of Sia, N.	
Mex—	4428
White, Maurice D., study of handling	
qualities of supersonic trans-	
ports—	11075
White, Natalie D., analysis and evalua-	
tion of hydrologic data for	
San Simon Basin, Ariz—	10299
White, S. S., electron beam welding—	11199
White Alice communications system,	
rentals charged for equipment	
by Morrison-Knudsen Co., Inc.,	
GAO examination—	10260
White Canyon uranium mining dis-	
trict, geology, ore deposits, and	
exploratory drilling—	12223

Entry

White Clay Creek:	
engineer report—	
departmental edition—	2233
document edition—	2080
White collar unions, unionism in	
Western Europe—	19802
White collar workers, see Government	
officials and employees.	
White fir, see Fir.	
White House, see Executive Mansion.	
White House Committee on Small	
Business, press releases—	4103
White House Conference on Conserva-	
tion, official proceedings,	
May 24-25, 1962—	11412
White House Conference on Export	
Expansion:	
export facts—	19359
report—	20251
White House Conference on Narcotic	
and Drug Abuse, proceedings	
Sept. 27 and 28, 1962—	9510
White House Conference on National	
Economic Issues, proceedings,	
May 21-22, 1962—	18370
White oak, see Oak.	
White Oak Creek:	
ecological survey, 1950-53—	9684
ecological survey, limnology—	11566
White Oak Lake:	
bed, Oak Ridge, Tenn., chemical	
and physical data on soils and	
plants—	1836
ecological surveys—	
limnology—	11566
vertebrate fauna—	11567
White pine, see Pine.	
White pine blister rust:	
forest overstory effects on micro-	
climate and related spread—	577
incidence in central Sierra Nevada,	
relation to canyon physiog-	
raphy—	2314
White River:	
flood control, engineer report—	
departmental edition—	464
document edition—	270
White Sea Biological Station, Moscow	
University, biology of White	
Sea, book review—	17820
White spot disease of fish eggs and	
fry—	6455
White Sulphur Springs, W. Va., cli-	
matic summaries of resort	
areas—	18367
Whitehead, A. B., spectrographic an-	
alysis of cerium by carrier dis-	
tillation technique—	1231
Whitelaw, John L., selected bibliog-	
raphy of highway traffic	
safety—	7413
Whiteman, Marjorie M., international	
law digest—	14705
Whiteouts, seeding procedures, inves-	
tigation—	19134
Whiting, Ronald, relief—	6225
Whiting fish, see Hake.	
Whitlock, Charles H., pitch-roll re-	
sponse conditions of rocket—	12882
Whitlow, Jesse W., geology of Du-	
buque North quadrangle, Iowa,	
Wisconsin, Illinois—	10281
Whitman, Merrill J., advanced nu-	
clear rocket materials re-	
search—	4491
Whitman County, Wash., Pullman	
area, ground water resources—	8353
Whittemore, Hiram D., mechanical	
harvesting and ribboning of	
ramie fiber—	4373
Whittemore, W. L., differential neu-	
tron thermalization—	7690
Whittington, Harold, starting and	
managing small motel—	14690

# INDEX 1963

	Entry		Entry
Whittle, Charles L., feasibility of aircraft-oil analysis system for operational use in field-----	14749	Wild animals, <i>see</i> Animals.	
Whitton, Rex M.:		Wild birds, <i>see</i> Birds.	
remarks-----		Wild fowl, <i>see</i> Game and game birds.	
Nov. 19, 1962-----	1433	Wild land, <i>see</i> Land.	
Dec. 4, 1962-----	3304	Wild-rye, <i>see</i> Ryegrass.	
Jan. 23, 1963-----	5700	Wilder, Charles S.:	
Apr. 6, 1963-----	9347	acute conditions, incidence and associated disability, U.S., July 1961-June 1962-----	14675
Sept. 26, 1963-----	20116	disability days, United States, July 1961-June 1962, etc-----	20112
Oct. 22, 1963-----	21099	persons injured while at work, United States, July 1959-June 1961, etc-----	5688
Oct. 28, 1963-----	20119	Wilderman, Ill., railroad accident-----	15662
WHO, <i>see</i> World Health Organization.		Wilderness areas:	
Who are working mothers?-----	13134	establish national system-----	
Wholesale prices, <i>see</i> Prices.		hearings-----	8118
Wholesale trade:		report-----	8060
automotive parts, Federal wage-hour law application-----	5766	national forests-----	16752
census of business, 1958-----		Wildlife:	
Puerto Rico-----	13303	code of Federal regulations-----	4925
subject reports-----	16877	conservation, increase through soil and water conservation-----	9564
florist facilities for Boston-----	35	minimize injurious effects of insecticides, etc., hearings-----	15324
operating costs and ratios, bibliography-----	11275	miscellaneous legislation, 1962, hearings-----	4757
primary market price index, monthly report-----	4308	pesticide-wildlife studies, review of Fish and Wildlife Service investigations, 1961-62-----	17447
sales and inventories, monthly report-----	3930	population management, hearings-----	15325
<i>see also</i> Stores—also names of commodities and industries.		publications, price list-----	12978
Who's who in Turkey-----	16124	research, problems, programs, progress, 1962-----	17446
Why a nuclear test ban treaty?-----	11530	research progress, 1961-----	545
Why invest in forest land? some forest owners give their answers-----	3382	resources affected by John Day lock and dam project-----	8275
Wichita, Kans.:		special scientific reports, wildlife series-----	558-559, 4971-72, 6470, 13977, 15536-537
Municipal Airport, weather observations, hourly, decennial census-----	13121	water resources development projects, planning policy, hearings-----	13653
occupational wage survey-----		wildlife leaflets-----	560-561, 4973-74, 12139-140, 17463-464, 19245
departmental edition-----	5439	wildlife review, abstracting service-----	4309
document edition-----	4695	Wildlife refuges:	
Redl wheat, new canned cooked bulgur, market position and consumer acceptance-----	4359	managers, address list, 1962-----	561
Wichita Falls, Tex., Municipal Airport, Kell Field, weather observations, hourly, summary, decennial census-----	20242	national-----	
Wichita Mountains Wildlife Refuge, mammals-----	4965	directory-----	4974
Wichita River:		establishment-----	6454
Lake Kemp, flood control, engineer report-----		public use, 1962-----	12139
departmental edition-----	2208	publications-----	12140
document edition-----	2077	refuge leaflets-----	555, 2294-95, 4958-68, 6456-62, 8278, 10197-198, 12138, 13967-971, 15526-534, 17466-460, 19238-240.
Wickman, Boyd E.:		<i>see also</i> names of refuges.	
defoliation by Great Basin tent caterpillar on greenleaf manzanita and mountain white-thorn ceanothus-----	12162	Wildlife Research Branch, Sport Fisheries and Wildlife Bureau, activities, 1962-----	17446
effects of sanitation-salvage cutting on insect-caused mortality at Blacks Mountain Experimental Forest, 1938-59-----	6500	Wildrye, <i>see</i> Ryegrass.	
Wicks, Charles E., thermodynamic properties of 65 elements, their oxides, halides, carbides, and nitrides-----	16318	Wilfong, Roy L., thermal expansion of oxides of yttrium, cerium, etc-----	7217
Wide-temperature-range springs-----	7598	Wilhold, G. A., predicting far-field acoustic environments due to moving rocket sound source-----	16384
Wideman, F. L., copper-----	19828	Wilken, A. A., Jr.:	
Widows and widowers, Supreme Court Justices' widows, increase annuities, report-----	20598	investment law of-----	5062
<i>see also</i> Pensions.		Congo (Brazzaville)-----	5065
Wight, Howard M., mourning dove status report, 1962-----	4972	Gabon-----	
Wigren, Lloyd E., wholesale prices and price indexes, 1960-----	16291	Wilkins, Anne, guides for field instruction for graduate schools of social work, etc-----	13044
Wilcox, J., tomato fruitworm, how to control it-----	11453	Wilkes-Barre, Pa., electric facilities of area, map-----	516
Wilcox, L. V., salt balance and leaching requirement in irrigated lands-----	13192	Wilkins, Max E., combustion tests of oxygen-hydrogen-hellum mixtures-----	19918
		Wilkins, Theresa B., education directory, 1962-63: pt. 3, higher education-----	12056

	Entry	Entry		
	Wilks, Syrrrel S., light-induced carbon monoxide in closed environments-----	18506	Wilmington, Del., New Castle County Airport, weather observations, hourly, decennial census-----	13119
	Will, Robert F., separation of powers at administrative level-----	6344	Wilson, Alvin K.: production of lumber and other forest products in Nevada, 1960-----	570
	Willamette River and Valley: below Portland, Oreg., engineer report-----	2191	Wilson, Edward L., mobile homes-----	21107
375	departmental edition-----	1978	Wilson, Franklin G., using injury statistics-----	12779
112	Willden, Ronald, geology of Jackson Mountains-----	12225	Wilson, H. B., wave action and break-water location, Superior entry, Duluth-Superior Harbor, Superior, Wis-----	487
888	Willenberg, Ernest P.: President's Panel on Mental Retardation, report of task force on education and rehabilitation-----	21074	Wilson, Louis F., green-striped maple worm-----	8293
362	report of mission to Denmark and Sweden, President's Panel on Mental Retardation-----	14651	Wilson, Ralph E., nomination, report-----	20541
	Willhite, Forrest M., improving mountain meadow production in West-----	1685	Wilson, Robert E.: remarks-----	
118	William F. Patterson Apprenticeship Memorial Award, 1st 10 winners, 1962-----	16814	Jan. 14, 1963 and Nov. 27, 1962-----	1846-47
360	Williams, Daniel N., independent duty, chap. 17, handbook of Hospital Corps, Navy-----	10934	June 13, 1963-----	11592
752	Williams, Don G., motion picture production facilities of selected colleges and universities-----	12068	Oct. 25, 1963-----	20329
	Williams, E. S., calibration of volt-ampere converters-----	11102	Wilson's snipes, <i>see</i> Snipes.	
925	Williams, Edgar G., control methods for household appliance dealers-----	1452	Winans, J. Gibson: college physics 1, USAFI study guide-----	4793
564	Williams, F. W., Southeastern vegetable processing industry, marketing practices and management problems, 1960-----	5829	college physics 2, study guide to be used with USAFI course C 518-----	17342
324	Williams, Harold W.: remarks-----		Winchester, Clarence F., present and future factors that may influence fish meal demand-----	13961
757	Nov. 29, 1962-----	4432	Wind, <i>see</i> Winds.	
447	June 5, 1963-----	11525	Wind River project: non-Indian-owned lands, cancellation of irrigation charges, approve-----	
325	Williams, Henry B., relief-----	13685	law-----	17046
978	Williams, J. Stewart, Lake Bonneville, geology of southern Cache Valley, Utah-----	2345	reports-----	13596, 17262
446	Williams, John R., geologic reconnaissance of Yukon Flats district, Alaska-----	2339	Wind tunnels: facilities for flow investigations at Institute for Applied Aerodynamics of Technical University, Dresden, East Germany-----	16012
545	Williams, Joseph J., jr., remarks, Apr. 22, 1963-----	8230	small arc-heated hypersonic, description and preliminary calibration tests-----	1275
275	Williams, Lloyd, mineral industry of Tennessee-----	3066	subsonic arc, structures and ablation material tests at high temperature-----	11024
559, 537	Williams, Lloyd A., flight vibration data from Delta 9 launch vehicle-----	20978	tests, circular plan form aircraft with peripheral jet for lift, thrust, and control-----	7245
653	Williams, Owen W., compendium of papers in fields of geodesy and planetary geometry-----	18454	transonic, static aerodynamic characteristics of configurations of Blue Scout launch vehicle-----	19927
74, 245, 309	Williamsport, Pa., surficial geology and soils of region-----	10813	Windbreaks: Nebraska, growth curves for ponderosa pine-----	4989
561	Willmott, Leslie F.: aqueous slurries of coal and granular materials, bibliography-----	14497	trees, spacing distance, etc., experiments, Cheyenne, Wyo-----	20294
974	gasification of bituminous coal with oxygen in pilot plant equipped for slurry feeding-----	1251	Winder, Alan S., acoustical space-time information processing-----	7365
454	Willow Creek: flood control, etc., engineer report-----	2219	Windham, Ohio, railroad accident-----	15660
139	departmental edition-----	1997	Windows, cleaning, comparison of State safety codes with ASA, chart-----	16269
140	document edition-----		Winds: aerosynoptic conditions of airplane buffeting in upper troposphere and lower stratosphere, USSR study-----	6679
555, 278, 971, 338-	Willow Springs quadrangle, Calif., geology-----	10276	Communist China, coastal waters, relationship between winds and surface currents-----	15665
446	Wills, need, suggestions for making-- <i>see also</i> Probate law and practice.	16733	continuous sinusoidal gusts, calculation of unsteady aerodynamic forces due to-----	5575
217	Wilmington, Calif., identification of 2,2,5-trimethylthiacyclopentane and 2,2,5,5-tetramethylthiacyclopentane in Wilmington, Calif., crude oil-----	14517	control of large launch vehicle with limited thrust vectoring-----	16409
3384			detail data measured by radar/balloon technique-----	11022
5062, 5065				
2044				
516				
9918				
2056				

# INDEX 1963

Entry	Entry
Winds—Continued	Wings (aircraft)—Continued
flow in 80-400 km altitude region of atmosphere, measurement techniques-----	delta—Continued
9151	highly swept longitudinal aerodynamic characteristics at low subsonic speeds-----
18167	1289
ionospheric motions into night and sporadic E correlations-----	hypersonic stability and control behavior at angles of attack between 30° and 90°-----
7262	7262
loads on launch vehicles, dynamic response of rising and falling balloon wind sensors-----	7238
20981	7238
measurement by Weather Bureau, history-----	79° clipped, rolling motions with wing-tip fins-----
16668	20996
mesospheric, observations from successive hourly rocket soundings-----	swept 65°, Mach number 5.96 at angles of attack from 65° to 115° and angles of roll from 0° to 25° at 90° angle of attack, effects of rounding corners and leading edges on windward-surface pressures-----
18451	14589
3237	14589
meteorological wind-scales-----	effects of vertical location on stability and control of canard airplane configuration-----
monthly and annual distributions as function of altitude, Santa Monica, Calif-----	5556
5588	5556
profiles in atmospheric friction layer, analysis-----	finite, in subsonic flow, integral equation relating general time-dependent lift and down-wash distributions-----
18453	3141
smoke-trail vehicle for application to wind-shear measurements up to 80,000 ft., development-----	14566
20994	14566
stratospheric circulation, winter of 1961, aspects derived from rocket firings over U.S-----	flat-plate wings having leading-edge sweep angles of 70° to 84°, static and dynamic stability derivatives-----
16376	14564
synthetic profiles, statistical model for aerospace vehicle design and launching criteria-----	flow angles, measurements in vicinity of 2 lifting configurations-----
14559	11035
three-dimensional flow and resulting precipitation in northern California storm-----	heat-transfer measurements and combinations-----
20246	7233
velocity, structure in ground surface layer, USSR study-----	inboard trailing edge camber of model at high subsonic speeds, aerodynamic effects-----
19445	12879
vertical velocity component, sonic anemometer for measuring-----	leading edge, internal modifications, influence on transient temperature rise during high-speed flight-----
9616	16354
7287	16354
Wallops Island, Va., above 50 km, measurement-----	loads due to deflected inboard ailerons on sweptback wing at transonic speeds-----
7290	3108
Windsor, Richard M., southern sky survey payload-----	longitudinal aerodynamic characteristics-----
15095	applicable for use as reentry configurations-----
4337	10993
Wine, insecticide residues in, studies-----	at angles of attack from -4° to 100°, investigation of delta-wing reentry configurations-----
7633	11010
Wing, Morgan E., response of otolith organs to tilt-----	low aspect ratio-----
Wing-fuselage combinations, see Airplanes.	aerodynamics of missiles employing-----
Wingate, Isabel B., buying for retail stores, bibliography-----	18116
9385	18116
Wings (aircraft):	cruciform-wing configuration employing canard and trailing-edge flap controls, aerodynamic characteristics-----
arrow, highly swept, designed for Mach no. 2.0 employing various degrees of twist and camber, off-design aerodynamic characteristics-----	14540
7277	14540
cambered-----	flutter of flat-plate surfaces at Mach numbers from 0.62 to 3.00-----
and twisted, swept planform, pressure and aerodynamic characteristics at Mach nos. of 1.61 and 2.01, errata-----	21002
3126	21002
span wing systems having minimum induced drag, bending-moment distribution-----	wing-body configurations, transonic investigation of static longitudinal aerodynamic characteristics-----
7248	14586
cantilever, flutter characteristic at transonic speeds, effects of sweep and aspect ratio-----	14586
5593	14586
complete-----	nonplanar lifting systems, induced lift and minimum induced drag-----
lateral control and dihedral effect with variable-incidence triangular wing and wing-tip ailerons at Mach number of 1.52-----	11090, 18168
5509	11090, 18168
delta-----	parawings-----
at angles of attack up to 90° and Mach number 6.85, pressure distributions-----	aerodynamic characteristics, effect of wing sweep-----
14588	18155
stability and control for reentry vehicle with deflected flap-type control surface tested at high subsonic speed-----	effects of camber and twist on aerodynamic characteristics-----
21001	3118
blunt, local pressure distribution for angles of attack up to 35° at Mach numbers of 3.4 and 4.7-----	large 1/12-scale dynamic radio-controlled, free-flight investigation of deployment, dynamic stability and control characteristics-----
3148	18151
	pressure distributions on 3 rigid wings simulating-----
	9159

try

289

262

238

996

589

556

141

566

564

035

233

879

354

108

993

010

116

540

002

586

168

155

118

151

159

Wings (aircraft)—Continued  
parawings—Continued

spacecraft combination, low-speed investigation of cable tension and aerodynamic characteristics	14584
wing-tunnel investigation of flexible-wing manned test vehicle	18152
pressure distribution to determine propeller slipstream effects at static thrust	1302
pressure measurements within propeller slipstream for V/STOL wind-tunnel model simulating transition	20995
retractable winged reentry vehicle at subsonic and supersonic speeds, wind-tunnel investigation	11007
supersonic leading and trailing edges and subsonic edges, time-dependent air forces with application to wing deforming harmonically according to general polynomial equation	3135
swept or unswept, steady-flow aerodynamic parameters in calculation of flutter characteristics for finite-span at subsonic, transonic, and supersonic speeds	10998
sweptback— factors affecting flutter characteristics calculated by piston theory, etc.	11067
45°, free flight tests of aspect ratio 3.15 and taper ratio 0.54 to measure wing damping of first bending mode and investigate flutter at transonic speeds	16357
planform, flutter characteristics in air and in Freon-12— section aerodynamic characteristics at Mach nos. 1.61 and 2.01	7273
thin flat-plate arrow, effect of aerodynamic heating on flutter	3120
trapezoidal— and delta, pressure data and section aerodynamic characteristics at Mach nos. of 1.61 and 2.01, errata	11064
pressure distributions and aerodynamic characteristics of spoiler-type controls	3127
wing-body combination, aerodynamic loading characteristics	3107
unsteady aerodynamic forces due to continuous sinusoidal gusts, application of numerical technique to lifting-surface-theory for calculation	16362
variable-sweep panels, use on right-triangular pyramidal lifting, reentry configuration, aerodynamic characteristics at Mach numbers from 0.40 to 1.10	5575
wing and flap loads of large scale V/STOL model, wind tunnel investigation	7249
wing-chord tilting-wing configurations, effects of propeller-diameter ratios at transition speeds	11029
Winkler County, Tex., geology and ground water resources	14560
Winning cold war, U.S. ideological offensive, hearings	5034
Winnisquam, N.H., railroad accident	7997, 11901
Winslow, Ariz., relief, r.p.ort	19370
	18866

Entry

## Winston, Matthew M.:

propeller slipstream effects as determined from wing pressure distribution on large-scale 6-propeller VTOL model at static thrust	1302
wing pressure measurements within propeller slipstream for V/STOL wind-tunnel model simulating transition	20995
Winston-Salem, N.C., Smith Reynolds Airport, weather observations, hourly, summary, decennial census	21168
Winter wheat, see Wheat.	
Winterfield, R. G., Piper PA-25 Pawnee distribution patterns	18398
Winters, Clyde W., free flight investigation of ablation of blunt body to Mach number of 13.1	1297
Wire, aluminum-coated, reinforcement for concrete mattresses— see also Electric wire and wiring— Wire rope	4875
Wire mills, scrap and metal consumption and stocks, mineral industry survey, monthly	3482
Wire rope, industry, trade practice rules	2284
Wire tapping: investigation, hearings, 1958-61, summary-report	2102
legislation, Attorney General's program, 1962, hearings	4788
Wiring, see Electric wire and wiring.	
Wirtanen, T., ANNA-1 satellite optical beacon	9617
Wirtz, W. Willard: addresses, etc.	
Nov. 15, 1962	1155
Dec. 11, 1962	3010
Dec. 12, 1962	3011
Dec. 13, 1962	3014
Feb. 1, 1963	5427
Feb. 8, 1963	5428
Mar. 4, 1963	7136
Apr. 1, 1963	9025
Apr. 2, 1963	9028
Apr. 9, 1963	9026
Apr. 19, 1963	10883
May 27, 1963	12773
June 24, 1963	14436
June 30, 1963	14434
July 2, 1963	16265
Aug. 21, 1963	19778
Department of Labor on its 50th anniversary	9027
Wischnkaemper, Paul, services of wholesale grocers to food-service operators	1705
Wisconsin: annual survey of manufactures, 1961, standard metropolitan statistical areas and large industrial counties, statistics	4566
cigar-binder tobacco, official standard grades	5789
climatological data	3517
county business patterns, activities covered by OASDI program	13283, 18672
electric rate book	19199
flow characteristics of 2 types of springs	6508
geology of Platteville quadrangle	17522
gully control structures in southwestern counties	7541
Ice Age National Scientific Reserve, establish, proposal for cooperative conservation	9240
landings, fishery products	4310, 12134
mineral industry, minerals year-book chapter	20962

Entry



# INDEX 1963

Entry	Entry
Wisconsin—Continued	Women:
native aspen stock, survival and growth as compared with 12-year hybrids.....	achievements and opportunities (address).....
15569	18757
population, 1960, characteristics.....	African women educators project report.....
18068	14072
precipitation data, hourly.....	business, opportunities and trends in employment (address).....
3771	18018
southern, sediment characteristics of small streams.....	career and job opportunities, report of World of Work Conference.....
8355	11416
urban areas along Mississippi River, flood control, engineer report—	careers in retailing.....
departmental edition.....	5772
437	changing status (remarks).....
document edition.....	1784
226	Congress, 88th, biographies.....
water resources investigations.....	14808
10294	equal pay—
weather stations, decadal census.....	act of 1963, general information.....
16689	18363
ZIP code directory.....	economic indicators relating to facts.....
20073	7519
Wise, Harold E., major principles of physics, chemistry, and geology of importance for general education.....	7520
4826	primer, basic questions.....
Wise, John P., bibliography on biology of cod, Gadus morhua, and related species.....	7521
12137	what equal pay principle means, questions and answers.....
Wiser, Vivian, writings relevant to farm management in records of Bureau of Agricultural Economics.....	14806
7309	equal pay, no discrimination on account of sex—
Wishart, Jack D., and wife, conveyance of mineral interests.....	hearings.....
7913, 13397, 13677	9928, 10020
Wiskoff, Martin F., selection of anti-tank missile gunners, status report, June 30, 1962.....	law.....
4467	11730
Withers, James C., electroplated cermet coatings for oxidation protection of substrates in excess of 2000°F.....	highlights.....
86	13113, 14769
Withlacoochee River: flood control, etc., engineer report—	reports.....
departmental edition.....	9991, 11797, 11801
document edition.....	equal rights amendment, questions and answers.....
4856	6213
4689	family and property law, Wyoming, summary.....
Witkind, Irving J., geology and uranium-vanadium deposits of Monument Valley area, Ariz.....	9514
12220	impact of education (address).....
Witnesses, Federal courts, fees in habeas corpus cases and forma pauperis proceedings, payment by U.S. marshal, report.....	9515
11810	3406
Wittmer, James F., pathogenic mechanisms in gas and fat embolism.....	1759
5885	Latin American, seminar, Bolivian articles.....
Witzke, Walter R., melting, extruding, and mechanical properties of electron-beam-melted tungsten.....	17815
12857	legal status in U.S.—
Woelfel, B. La Salle, what kind of money do you need?.....	Connecticut.....
7426	7518
Wolbach, John G., relative position of sunspots and flares.....	District of Columbia.....
14694	3403
Wolf, Ken: blue-sac disease of fish.....	Georgia.....
13963	13133, 20253
white spot disease of fish eggs and fry.....	Massachusetts.....
6455	3404
Wolfbein, Seymour L.: economic growth and labor market policy.....	New Mexico.....
19783	9512
presentation on manpower in U.S. with projection to 1970.....	3405
296	modern American woman, status and opportunity (address).....
Wolfe, Deborah P., education and citizenship in public school system of Puerto Rico, interim report.....	9024
11893	16897
Wolfe County, Ky., coal geology of Selts quadrangle.....	our women of 1860's.....
598	11669
Wolff, Reinhold P., construction industries in Southern Florida.....	physical fitness program for female special staff personnel and TD organizations, Army pamphlet.....
1451	1800, 14940
Wolff, Richard C., cardiopulmonary resuscitation.....	political rights in member nations of United Nations.....
5887	3407
Wolle, William D., economy of Saudi Arabia, basic data.....	Protective Labor Legislation Committee report.....
5068	20081
Wolman, William, reliability model and analysis for Project Mercury 3-orbit manned and unmanned mission.....	State labor laws, summaries—
1313	Arkansas.....
	9511
	Michigan.....
	11414
	Ohio.....
	11415
	status and activities in labor market today and tomorrow (address).....
	14807
	telephone workers and changing technology.....
	20254
	why mothers work, review of data, 1940-62.....
	20256
	work opportunities through education (address).....
	9023
	workers—
	facts.....
	11413
	handbook, 1962.....
	9513
	in U.S., background facts.....
	1595, 7517
	trained workers for future.....
	18371
	United States, background facts.....
	20252
	workers, 1960—
	California.....
	3408
	Georgia.....
	5773
	Indiana.....
	18372
	Iowa.....
	5774
	Massachusetts.....
	5775, 21180
	Minnesota.....
	11417
	Nebraska.....
	5776
	New York.....
	14809
	Ohio.....
	14810
	Oregon.....
	9516

	Entry		Entry
entry		Wood preservatives:	
		comparison, Mississippi post study,	
8757		1963, progress report.....	12167
4072		stake tests, comparison, 1963 progress report.....	12168
8018		used in U.S., preliminary statistics, 1962.....	12165
1416		Wood pulp:	
5772		aspen semichemical corrugating pulp, bleachability.....	19267
1784		chipping installations in Midsouth.....	12194
4808		current industrial reports.....	3574, 18684
		industry opportunities in western Colorado.....	4992
		Lake States pulpwood production up while Canadian imports drop to all-time low.....	15570
8363		production and consumption.....	6482
7519		pulpwood prices in Southeast, 1961.....	6521
7520		pulpwood production in Lake States counties, 1961.....	6488
7521		southern pulpwood, production, 1961.....	10242
4806		supply-demand, report.....	17113
		Wood River Drainage and Levee district:	
0020		flood control, engineer report—	
1730		departmental edition.....	19154
4769		document edition.....	18806
1801		Wood ticks, how to control them.....	20284
6213		Woodcocks:	
9514		hunting, possession, transportation, importation, Federal regulations, 1963-64.....	15535
9515		status report, 1962.....	6470
8406		Woodhouse, William H., relief.....	11775
1759			18986, 20406
7815		Woodlands, see Forests and forestry.	
7518		Woodling, C. H., orbital error analysis of Scout research vehicle.....	11034
8403		Woods, John C., soil survey of Twiggs County, Ga.....	16566
0253		Woods, see Wood.	
8404		Woodside, N.Y., railroad accident.....	10359
9512		Woodward, Henry T., thermodynamic properties of carbon-dioxide and nitrogen mixtures behind normal shock wave.....	7257
8405		Woodward, Richard L., removal of radiological, biological, and chemical contaminants from water.....	16520
9024		Woodworking, production, fulfillment of plans of scientific research work, etc., USSR study.....	6659
6897		Woodworking machinery and equipment, Federal item identification guides for supply cataloging, supplements.....	3653
1669		Wool, Harold, changing pattern of military skills.....	20647
800.		Wool:	
4940		and wool tops, futures trading and open contracts.....	3748
3407		broad woven goods, current industrial reports.....	3575
0081		carpet and related fibers, stocks, current industrial reports.....	3575
9511		consumption on woolen and worsted systems, current industrial reports.....	3574, 4580, 16893
1414		cooperative marketing in Indiana.....	17416
1415		foreign agriculture circulars.....	3720
4807		futures, commitments of traders.....	3529
0254		grading, reducing costs in warehouses.....	1707
0256		market news, weekly summary and statistics.....	3874
9023		production and value, 1962.....	9453
1413		production, shorn, 1963.....	18343
9513		statistics and related data, 1962, supplement.....	5842
7517		use of treated burlap bags for shipping, appraisal.....	12048
8371			
0252			
8408			
5773			
8372			
5774			
1180			
1417			
4777			
1809			
1810			
9516			

# INDEX 1963

Entry	Entry
Wool—Continued	
wool situation.....	4311
yarn and broadwoven fabric industry, wage survey.....	18041
Wool Department, IFBCA, organization and operations.....	17416
Woolens:	
machinery activity, 1962, current industrial reports.....	11630
systems, consumption, current industrial reports.....	16893
Woolf, P. L., fuel-oil injection in blast furnace.....	3103
Woolfolk, E. J., identification marking of experimental animals.....	10229
Woolhiser, David, gully control structures in southwestern Wisconsin.....	7541
Woolson, John R., seismic and gravity surveys of Naval Petroleum Reserve no. 4 and adjoining areas, Alaska.....	5020
Wooten, O. B.:	
detecting and measuring mechanical picker lubricants on cotton.....	1631
planter-sprayer for precision placement of subsurface bands of herbicides in cotton rows.....	18400
Worcester, Mass.:	
occupational wage survey—departmental edition.....	18035
document edition.....	17062
Worden, Mrs. M. Orta, relief.....	13522
Words:	
algorithms associated with word systems, USSR study.....	12701
concurrent repetition of word flow, intelligibility factors and scores.....	9099
Work:	
Communist attitude, USSR study.....	14323
experience, employment status, census of population, 1960.....	18705
improving standards for wage earners.....	9040
mentally retarded, evaluation, conference proceedings.....	3395
muscular, brain and muscle activity, USSR study.....	891
rules, featherbedding, restriction of output, selected references.....	18014
working life for men, length of, 1900-60.....	14437
working life table for men, 1960.....	14483
see also Employment—Occupations.	
Work force, see Labor.	
Work injuries, see Accidents—Injuries.	
Work stoppages, see Strikes and lockouts.	
Workers, see Farm labor—Labor—Volunteer workers—Women—Youth.	
Working for U.S.A.....	9753
Working mothers, see Mothers.	
Working with sick and disabled, sketches.....	19157
Working women, see Women.	
Workman, Robert D., prolonged exposure of animals to pressurized normal and synthetic atmospheres.....	9101
Workmanship and design practices for electronic equipment.....	5660
Workmen's compensation, see Employers' liability and workmen's compensation.	
Works of Institute of Oceanology (USSR periodical):.....	8920
Workshops, small business, prospective owners.....	21103
Worktime required to buy food and other articles.....	7179
Workweek, see Hours of labor.	
World, see Earth.	
World agricultural production and trade, statistical report.....	8290
World agricultural situation, 1963.....	2143
Eastern Europe supplement.....	12047
Western Hemisphere supplement.....	8156
World bank, see International Bank for Reconstruction and Development.	
World economy and international relations (Russian periodical):.....	
translations.....	10384
World Food Forum, proceedings.....	4378
World Games, Inc., relief.....	7873
World Health Organization, regulations, yellow fever.....	1525
World in space.....	9141
World list of future international meetings.....	4314-15
World motor vehicle production and registration, 1961-62.....	7744
World of Work Conference, career and job opportunities for women, report.....	11416
World petroleum statistics, 1962.....	18114
World port index, 1963.....	18217
World strength of Communist Party organizations.....	7458
World trade, see Commerce.	
World War, 1939-45:	
Army personnel, history of Medical Department.....	16832
industry employment growth since internal medicine, infectious diseases.....	16267
liberation of Belgrade, Oct. 1944.....	9666
Medical Dept., Army, organization, etc.....	8859
preventive medicine.....	11550
PT boat operations in U.S. Navy, at close quarters.....	11551
Siegfried Line campaign, European theater of operations.....	5653
surgery, thoracic.....	12819
United States Army in World War II.....	5920
USSR—	9107, 12819-820
history, 1941-45, USSR review.....	20815
military economy, 1941-45.....	17643
operations, translations.....	8640
veterans, see, in main alphabet, Veterans.	
war in the Pacific.....	9107, 12820
World Youth Festival, Helsinki, Communist Youth activities, 1962, print additional copies, report.....	11856
Worley, David P., calculating optimum product combinations from standing trees.....	20705
Worms:	
helminthological science, current problems, USSR study.....	19401
publications, price list.....	11222
see also Polychaeta—also names of worms.	
Wornom, Dewey E.:	
aerodynamic characteristics of flexible-canopy paraglider model.....	11056
transonic aerodynamic characteristics of 45° swept-wing-fuselage model, etc.....	18126
Worsted:	
machinery activity, 1962, current industrial reports.....	11630
systems, consumption, current industrial reports.....	3574, 4580, 16893
Worth, K., low-permeability graphite properties for reactor application.....	14966

# JANUARY-DECEMBER

Entry

7179

8290  
2143  
2047  
8156

384

378

873

525

141

416

114

217

458

832

267

366

859

550

551

453

9

20

15

43

40

20

56

6

50

3

6

## Entry

Worts, G. F., jr., ground-water conditions in coastal artesian basin of British Guiana	15619
Wounds, treatment, polychlorvinyl films, USSR study	19506
Woven goods, see Textiles.	
Wright, Grace S.: core program— selected references, 1961-63	17362
unpublished research, 1956-62	17363
junior high school, survey	15433
Wright, Irene V., patent and trademark regulations of Sweden	5075
Wright, J. W., mean electron density variations of quiet ionosphere	11098-99, 19952
Wright Air Development Center: technical notes, abstracts, 1958-59	5883
technical reports	9636
abstracts, 1958-59	5883
Wright Air Development Division: technical notes, abstracts, 1960-61	5883
technical reports	86-87, 1779-80, 4424, 5893, 7646-49, 9637-39, 11515-518.
abstracts, 1960-61	5883
Wright Brothers Day, proclaim 17th of December each year, report.	17147
Wright Brothers National Memorial, general information	9246
Wrightsville Beach, N.C.: hurricane survey, engineer report— departmental edition	467
document edition	248
Wrigley, Ada, U.S. export credit insurance and guarantee programs	14071
Wrigley quadrangle, Ky., geology and refractory clay deposits	5016
Writers, see Authors.	
Writing, PACAF basic bibliographies.	11511
Writing paper: pad, Federal standard	17441
white and colored, Federal standard	535
Writings on American history, 1953: departmental edition	16813
document edition	17058
WS series	3741
Wu, Chang In, relief	18834
Wu, W. R. K., densimetric method in studying coal and coke structure	19858
Wu-hsi, Kiangsu Province, China, description of city	844
Wuori, Albert F., snow stabilization for roads and runways	19135
Wupatki National Monument, general information	11125
Wyner, Lillian, local office organization, Employment Service	19128
Wynoochee River: flood control, engineer report— departmental edition	2234
document edition	2018
Wyoming: annual survey of manufactures, 1961, standard metropolitan statistical areas, and large industrial counties, statistics	4571
census of population, 1960, characteristics	11613
climatological data	3517
county business patterns, activities covered by OASDI program	15054, 18677
electric rate book	515
5B redevelopment area, statistical profile	13365

## Entry

Wyoming—Continued mineral industry, minerals year-book chapter	5071
national forests, pest control progress, 1961	10230
northern, water supply outlook and snow surveys	4287
Pole Mountain district of Medicine Bow National Forest, retrocede jurisdiction to, report	13719
precipitation data, hourly	3771
public school finance program, 1961-62	17387
rare-earth-metal and thorium resources, technological and economic problems	3055
snow report	11288
water supply outlook and snow surveys	4292
weather stations, decadal census	16690
women, family and property law, summary	9514
ZIP code directory	20074

## X

X-15 airplane, see Airplanes.	
X-ray apparatus, dental, State radiological health activities	9357
X-rays: combined effect of high-frequency electromagnetic field and X-ray under industrial conditions, USSR study	17814
diffraction— data reduction program for IBM 704 and 7090, addenda	9273
powder patterns	11096, 20641
effects, harmful, on mouse testes, comparison with fast neutrons	20813
irradiation, USSR studies	16055
machine of varying output, energy dependence determinations in 60-180 KeV range	11558
physics and technique, fundamentals	19818
preferred orientation meeting, papers	16850
roentgen irradiation, nucleic metabolism in regeneration of skeletal musculature, effect, USSR study	17939
satellite borne spectrometer scanning mechanism	1271
solar, proportional counter spectrometer for measurement	7618
solubility of impurities in beryllium, USSR study	6764
spectrographic determination of cobalt and nickel in tungsten	20965
Xenon, atmospheric xenon origin	5607

## Y

Ya-Tung, China, general information	6638
Yabroff, Bernard, employment and changing occupational patterns in railroad industry, 1947-60	9053
Yadkin County, N.C., soil survey	1506
Yaggy, Paul F., VTOL propellers in descent, tests	7292
Yahraes, Herbert, narcotic drug addiction	14606
Yamamoto, Teruo, water storage capacities of soil under 4 different land uses in Hawaii	17484
Yancey, Robert M., king salmon of Cook Inlet, Alaska	13974
Yang, Jae H., relief	17079
Yang-shu-p'u, China, from slums to modernity, new frontiers	1136

# INDEX 1963

Entry	Entry
Yangtze River, flood control, Ching Chiang flood dispersion, Communist China.....	5316
Yao, J. T. P., low-cycle fatigue behavior of axially loaded specimens of mild steel.....	18304
Yard service performance of class 1 railroads in U.S.....	4317
Yards and Docks Bureau:	
design manuals.....	1597-1606
engineered performance standards, OTS bibliography.....	15030
protective shelter studies.....	18236
Yardstick for need.....	17415
Yarn:	
cotton, moisture regain, standard of trade.....	13259
production, 1961, current industrial reports.....	1895
spun, for sale, current industrial reports.....	3574
Yasaki, Paul T., experimental investigation of 0.35 hub-tip radius ratio transonic axial flow rotor, etc.....	5559
Yates, E. Carson, Jr.:	
flutter characteristics of 45° swept-back wing planform in air and in Freon-12.....	7273
modified strip-analysis flutter calculations from finite-span wings at supersonic speeds.....	14566
static longitudinal aerodynamic characteristics of elastic canard-fuselage configuration as measured in air and in Freon-12, etc.....	16379
steady-flow aerodynamic parameters in calculation of flutter characteristics for finite-span swept or unswept wings.....	10998
Yauco, P. R., redevelopment area, statistical profile.....	13378
Yawney, Harry W., control of rhododendron by basal spray.....	10217
Ybor Channel:	
Tampa Harbor, Fla., engineer report.....	
departmental edition.....	450
document edition.....	256
Yearbooks:	
agriculture, authoritative information, list.....	11229
Bulgarian statistical, 1961.....	953
Forest Service intermountain region, 1961.....	568, 580
Hungarian statistical, 1961.....	12697
minerals, 1961—	
area reports—	
departmental edition.....	1226
document edition.....	285
fuels—	
departmental edition.....	9116
document edition.....	7850
metals and minerals except fuels—	
departmental edition.....	1225
document edition.....	284
Navajo Indians, 1951-61, decade of progress.....	5046
North Korean central yearbook, 1960, information from.....	1122
North Korean, 1961.....	6959
Yee Foo, see Yung Yuen Yau.	
Yellow fever, World Health Organization, regulations.....	1525
Yellow jackets, see Wasps.	
Yellow poplar, see Tuliptree.	
Yellow River:	
middle loess region, erosion in gully drainage systems and its relation to water and soil conservation, Communist Chinese study.....	6695
Yellow River—Continued	
trip to upper reaches.....	1138
water and soil conservation in middle loess region, Communist China handbook.....	14212
Yellowfin tuna, see Tuna fish.	
Yellowstone Lake:	
cutthroat trout—	
equilibrium yield and management.....	17462
natural variations in spotting, etc.....	19243
Yemen, labor conditions.....	20936
Yen, Ching Heing, and wife, see Ching Heing Yen, and wife.	
Yen, Tim L., relief.....	17209, 18823, 20420
Yen, Yin-Chao, thermal conductivity of ventilated snow.....	19133
Yenisey River, USSR guidebook on area.....	10730
YH-41, see Helicopters.	
YHU-1B category II performance tests.....	5856
Yield tables, see Volume and yield tables.	
Yon Ok Kim, see Kim, Yon Ok.	
Yoo Chul Soo, relief.....	8030, 13404, 13483
Yoo Sei Chun, relief.....	17234
Yook, Hom Wah, see Hom Wah Yook.	
York, Pa.:	
occupational wage survey—	
departmental edition.....	10903
document edition.....	9824
York County, Pa., soil survey report.....	16564
Yorktown Battlefield, general information.....	16443
Yoruba language, Foreign Service Institute, basic course.....	14735
Yosemite National Park, general information.....	12933
Yoshikawa, Kenneth, charts for air-flow properties in equilibrium and frozen flows in hypervelocity nozzles.....	3117
Yost, I. D., floods of Apr.-June 1957 in Texas and adjacent States.....	8352
You and United Nations.....	3342
You and your passport.....	18325
You as volunteer, handbook for hospital volunteer workers.....	21152
Young, Dudley E., cooperative Federal-State statistical programs, past, present, and future.....	16292
Young, George R., coning motions of final stages of Scout development vehicles.....	1276
Young, L. L., waterpower resources in Trask River basin, Oreg.....	17531
Young, John N., moving-cockpit-simulator study of piloted entries into earth's atmosphere for capsule-type vehicle at parabolic velocity.....	11068
Young, Robert W., Navajo yearbook, 1951-61, decade of progress.....	5046
Young Wal, see Wal Young.	
Young people, see Youth.	
Young workers, see Youth.	
Youngs, Robert L., strength and related properties of mountain hemlock.....	20706
Youngstown, Ohio:	
Municipal Airport, weather observations, hourly, decennial census.....	21172
principal electric facilities, maps.....	517, 2266
Your civil service veterans preference.....	9756
Your Federal income tax for individuals.....	631



# JANUARY-DECEMBER

	Entry
138	Your money and your life, FDA catalog of fakes and swindles in health field----- 19248
212	Your social security----- 13047
	Your State Department----- 7433
	Youssef, Hanna G., see Joseph, John.
462	Youth: adolescent inhabitants of high altitudes, electrocardiographic and vectorcardiographic observations----- 71
9243	American-- how fare in 1962?----- 8173
9936	qualification for military service----- 1814
0420	books for leaders----- 15089
0133	challenge of jobless youth----- 9327
0730	Colombian Communist Youth Congress, Communist press comments----- 2887
5856	Communist International youth apparatus----- 17317
	counseling and employment service----- 4833
	creating experience opportunities, conference report----- 4596
3483	East German, law draft text----- 20806
7234	educationally disadvantaged program, conference on teaching employment----- 15439
0903	design for community action----- 3017
9824	education, physical fitness programs, message from the President----- 4728
3564	effect of labor laws on placement----- 12810
6443	job guide for young workers----- 4835
4735	list of publications----- 5434
2933	President's Committee on Youth Employment, reports of subcommittees----- 18274
1152	employment act of 1963-- hearings----- 8128, 9931
8352	reports----- 7960, 8062
3342	exceptional-- education----- 385
8325	State education agency publications----- 13847
1152	farm and nonfarm, school dropout rates----- 19088
6292	farmwork, safety, and you, discussion for youth leaders, teachers, etc----- 5433
1276	handicapped, special services----- 13111
7531	Indian, higher education aids----- 5045
1068	Italian Communist views----- 2946
5046	Italian Communist Youth Congress, Serri's report to----- 2752
0706	juvenile and young adult criminality, illegal narcotics traffic and effect, hearings----- 8123, 12024
1172	Komsomol, and foreign students, Soviet news reports tension between----- 10807
517	meaning of manpower development and training act of 1962----- 14440
2266	Mongolia, activities----- 12459
9756	Morocco, problems (speech)----- 20788
631	motivations for leaving school----- 19095
	new frontiers for educational advancement (address)----- 19775
	occupational training-- hearings----- 17325
	reports----- 17278, 18913
	offenders, gaps in State programs----- 1925
	program, Senate, continue, report----- 11958
	publications concerning, price list----- 14656
	rural-- career guidance----- 14875
	perspectives on employment (address)----- 18019
	special training needs for young workers----- 10885
	State committees for, how-to-do-it----- 6012

	Entry
	Youth--Continued
	teenage nutrition, selected programs for improving----- 20663
	teenagers and venereal disease, sociological study----- 177
	television violence and crime programs effects on young people, hearings----- 8122
	print additional copies, reports----- 13633, 13767
	USSR, role in creating abundance of fish----- 16232
	volunteer for good of your community, your hometown needs you for a variety of useful jobs----- 10888
	World Youth Festival, Helsinki, Communist activities, hearings----- 2065
	print additional copies, report----- 11856
	Yugoslavia, Association of Young People----- 12762
	Youth and Children, Joint Conference on, see Joint Conference on Children and Youth.
	Youth Conservation Corps: establish-- hearings----- 8128, 9931
	reports----- 7960, 8062
	Youth Employment, President's Committee on, see President's Committee on Youth Employment.
	Yo-yo de-spin systems: stretch-- analytical theory of satellites----- 9169
	dynamic tests----- 19920
	Yttrium: behavior in rare-earth-amine extraction systems and effect of sequestrants----- 12838
	halides, metallothermic reduction----- 16331
	sesquioxide, high-temperature heat content and entropy----- 5501
	thermodynamic properties at high temperatures----- 5482
	Yttrium oxide: high temperature spectral emissivity----- 14987
	thermal expansion----- 7217
	Yu, Y. S., runoff from impervious surfaces, numerical computations----- 19151
	Yuan, Frances, testimony, hearings----- 2100
	Yugoslavia: agricultural commodities, agreements----- 1516, 5735, 9407, 16598
	Association of Young People----- 12762
	chemical institutes reorganization study----- 17745
	commission for use of universe for peaceful purposes, order concerning----- 10655
	Council for Coordination of Scientific Research, members----- 17746
	education, and the new reform----- 17369
	engineers and technicians association, meritorious, etc., members----- 944
	exports and imports, licensing and exchange controls----- 2434
	Federal Council for Coordinating Scientific Research, ruling on naming President, general secretary and members----- 16036
	food products market, 1956-61, examination----- 10565
	health insurance benefits, obtaining abroad, regulations----- 16194
	hydraulic research, 1954-62, review of development----- 20875
	legal journals, abstracts----- 2474, 2789, 5138, 7076, 10379, 12389, 12768, 16045, 19373, 19425, 19635.

# INDEX 1963

	Entry		Entry
Yugoslavia—Continued		Zettie, Eugene V., combustion performance of 2 experimental turbojet annular combustors at conditions simulating high-altitude supersonic flight	14530
localism, nature and causes, translation	2576	Zhurnal mikrobiologii, epidemiologii, i immunobiologii (periodical): translations	15933
nuclear affairs, regulations and instructions	646	Zhurnal neuropatologii i psikiatrii (periodical): translations	10786
nuclear science developments	19618	Zhurnal obshchey biologii (periodical): translations	14188
petroleum and gas processing, development and problems, translations	15705	Zhurnal vysshey nervnoy deyatel'nosti (periodical): translations	1083, 2476, 6675
radioisotopes	10545	Ziegler, P. N., equalization teaching machine	11183
rules concerning hog and chicken plague	10685	Zietlow, Alfred E., jr., biology 2, high school course	2111
science doctorates, 1961-62	12578	Zikeev, Nikolay T., scientific and technical serial publications of Soviet Union, 1945-60	19813
scientific research	10597	Zimmer, Charles E., chance distribution of inconsistent response patterns in paired comparison and multiple ranking designs	7625
scientific research institutions, list	15786	Zimmer, Paul D., fish passage report, Rock Island Dam, Columbia River, 1961	6464
socialistic country? Chinese study	20872	Zimmerman, Arthur V., optimum low-acceleration trajectories for interplanetary transfers	3131
veterinarians, specialization of 1st class, regulations	10683	Zimmerman, Howard M., basic data on economy of Israel	10339
work of Nikola Tesla Electro-Technical Institute in Belgrade in 1961	906	Zimmerman, James A., college biology 2, study guide, etc.	13831
Yukon Flats, geologic reconnaissance of district	2839	Zimmerman, James H., college biology 1, study guide, etc.	4792
Yukon River, Rampart Canyon Dam feasibility	2104	Zimmerman pine moth, <i>see</i> Moths	
Yung Yuen Yau, relief	13680	Zinc:	
Yunnan Province, China:		Deep Creek zinc-lead mine, methods and costs	14500
economic geography	8438	electrodeposition	19871
small mammals, amphibians, and reptiles, material	16234	geology of upper Mississippi Valley zinc-lead district (series)	10281, 17522
Yutsts, A. P., configuration interaction in carbon atom	18174	industry, mineral industry survey, monthly	4318
		lead-zinc domestic mining industries, conditions—	
		hearings	15315
		report	15278
		mine production, mineral industry survey, monthly	4319
		minerals yearbook chapter	19883
		mining stabilization program, annual report, 1962	7201
		oxidized deposits of U.S., Utah	14017
		primary, industry, outlook for 1963 and review of 1962	4536
		recovery from slimes	16335
		scrap, mineral industry survey, monthly	4321
		stabilizing mining by small domestic producers, amend act—	
		law	15154
		reports	7936-37, 7948-49, 11985-986
		supergene deposits of Utah, detailed study	14017
		Tariff Commission report—used to dope germanium, photoelectric properties	7037
		workers' petition for adjustment assistance, Tariff Commission report	9463
		Zinc oxide, mineral industry survey, monthly	4320
		Zinn, Charles J., how our laws are made	11756
		Zinn, W. H., power reactor technology	4030

## Z

Z-function solution for motion and heating during atmosphere entry from equatorial orbits of rotating planet

5583

Zabetakis, Michael G.:

autoignition of lubricants at elevated pressures

1248

biological formation of flammable atmospheres

3085

hazards in using liquid hydrogen in bubble chambers

20666

Zaffarano, Richard F., reservoir oil characteristics, Greater Aneth area, Utah, etc.

10944

Zaid, Charles, preliminary inventory of records of Committee on Fair Employment Practice (record group 228)

1327

Zanzibar, official publications, bibliography

7184

Zavodskaya laboratoriya (periodical):

metallurgical reports

10590

Zdravookhraneniye Belorusii (periodical):

translations

6941

Zeeman effect, *see* Magneto-optics.

Zeeman phenomenon and magnetic resonance, USSR

5280

Ziesel, Joseph S.:

manpower and training

9032

manpower and training trends, outlook, programs

14439

Zietlow, Alfred E., jr., biology 1, high school course

6309

Zeleny, Lawrence, sedimentation as measure of wheat quality, 1962 crop

4363

Zeller, J. H., hot-lot equipment

13166

Zeller, R. P., reconnaissance of coastal dunes of California

6357

Zender, George W., strength of filamentary sheets with one or more fibers broken

9158

# JANUARY-DECEMBER

try		Entry		Entry
	Zion National Park, general information -----	9247	Zone refining, electric current application -----	4424
	Zip code:		Zones, C. P., ground water in alluvium of Kings River Valley -----	8348
530	information, publications for sale by Superintendent of Documents, price list -----	20089	Zoologicheskii zhurnal (periodical): translations -----	5401, 6974, 8444, 8907, 12577, 14296, 15841
933	last word in mail addressing -----	16487	Zoology:	
	Zirconia, see Zirconium oxide.		Communist China, Chinese-Soviet expeditions to southwest, results -----	16231
	Zirconium:		medical and veterinary, index catalogue -----	16716, 18409
786	alloys-----		oriental serial publications, bibliography -----	16414
	design for application as nuclear fuel cladding for steam service, progress reports -----	14979, 14983, 16843	USSR, translations from zoological journal -----	5401, 6974, 8444, 8907, 12577, 14296, 15841
188	design program, progress report, evaluation of Zr 1.5 w/o Nb cladding for use in boiling water reactor -----	9672	Uzbek Academy of Sciences, research activities -----	1112
875	Hall coefficient of superconducting and normal Nb-25% Zr -----	18234	Zoonoses, control of disease common to man and animals, USSR study -----	2472
183	chemical and physical methods of analysis -----	1823	Zooplankters, towed pump and shipboard filtering system for sampling -----	13975
111	corrosion mechanism of zirconium and alloys -----	14978	Zooplankton:	
813	hydrogen overvoltage and electrochemical potentials -----	18571	Bare Lake, Alaska, composition, abundance, and depth distribution after fertilization -----	6465
925	intermetallics, hydrogen overvoltage and electrochemical potentials -----	18571	organisms, biological indicators of weak radioactive contaminations in northern seas, USSR study -----	8992
464	minerals yearbook chapter -----	16349	volumes off Pacific Coast, 1959 -----	19241
	Zirconium diboride, metallic binders -----	16334	Zorich, Antonio, and family, relief -----	20549
	Zirconium dioxide, see Zirconium oxide.		Zuni Pueblo, story -----	10308
131	Zirconium oxide:		Zuromsky, G., irradiation testing of ceramic fuels -----	18566
	calcia-stabilized, deterioration -----	3154	Zymelman, Manual, cotton textile cycle, its nature and trend -----	11684
339	diffusion of oxygen -----	14978		
	PuO <sub>2</sub> -UO <sub>2</sub> fast reactor fuel post-irradiation examination -----	123		
831	Zissu, Theodore, relief -----	13523		
792	Zlatin, N., machining of refractory materials -----	56		